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Result
No.
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Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                    Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                            Searched:
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Perfect score:
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Pred. No. is the number of results predicted by chance to have score greater than or equal to the score of the result being pand is derived by analysis of the total score distribution.
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82.5
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420
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394
364
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length: 2000000000
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Match Length
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97.6
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1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*
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STAGTAEAKAIAGAIKGGKE....
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12,
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G81277
A59099
A56143
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$33185
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$33197
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S33190
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E95009
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probable RTX famil
hypothetical prote
flagellin Cj1338c
hypothetical prote
surface-array prot
               high-molecular-wei
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cell wall surface
conserved hypothet
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flagellin, 40K - P
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flagellin Cj1339c
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4 4 5 4	43	42	41	40	39	38	37	36	35 5	34	33	32	31	30
71.5	72	72	72.5	72.5	72.5	72.5	72.5	73	73	73	73	73.5	74	74
15.9	16.0	16.0	16.1	16.1	16.1	16.1	16.1	16.2	16.2	16.2	16.2	16.3	16.4	16.4
377	2551	1741	893	877	635	575	575	1343	1343	576	474	912	3029	1325
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B82112	B98047	S74910	A37284	F90070	S57714	I40615	S41310	D85724	E90893	A39228	S52444	D72644	S76109	A64905
synapse associated flagellin FlaD VC2	hypothetical prote	hemolysin - Synech	surface-array prot	Clumping factor B	cspB protein - Clo	flagellin protein		hypothetical prote	hypothetical prote	flagellin A - Camp	flagellin - Legion	hypothetical prote	hypothetical prote	ydeK protein - Esc

ALIGNMENTS

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R;Masten, B.J.; Joys, T.M.
submitted to the EMBL Data Library, September 1992
A;Description: Molecular analysis of the flagellar antigen complex of Salmonella.
                                                                                                                                                                                                                                                                   phase-1 flagellin - Salmonella montevideo (fragment)
C;Species: Salmonella montevideo
C;Dace: 06-Jan-1995 #sequence_revision 06-Jan-1995 #text_change 26-Aug-1999
C;Accession: S33190
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A; Residues: 1-504 < MAS>
A; Cross-references: EMBL:
C; Superfamily: flagellin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     R;Masten, B.J.; Joys, T.M. submitted to the EMBL Data Library, September 1992 A;Description: Molecular analysis of the flagellar antigen complex of Salmonella.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 1

833189

phase-1 flagellin - Salmonella enteritidis (fragment)

C;Species: Salmonella enteritidis

C;Date: 06-Jan-1995 #sequence_revision 06-Jan-1995 #text_change 26-Aug-1999

C;Accession: S33189
                                                                                           A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-504 <MAS>
A;Cross-references: EMB;
                                                                                                                                                                   A; Reference number: S33185
A; Accession: S33190
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A; Accession: S33189
                                                                         C; Superfamily: flagellin
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Best Local (
                   Query Match
Best Local :
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 l Similarity
88; Conserv
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   Conservative
                                                                                               EMBL: Z15069; NID: g297002; PIDN: CAA78778.1; PID: g297003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL: Z15068; NID: g296999; PIDN: CAA78777.1; PID: g297000
                   97.6%;
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Score 440; DB 2;
Pred. No. 1.7e-33;
0; Mismatches 2
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Pred. No. 1.6e-34;
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     2,
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1 STAGTAEAKAIAGAIKGGKEGDTFDYKGVTFTIDTKTGDDGNGKVSTTINGEKVTLTVAD

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RESULT
S33185
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C; Superfamily:
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R;Masten, B.J.; Joys, T.M.
submitted to the EMBL Data Library, September 1992
submitted to the EMBL Data analysis of the flagellar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT
S33191
phase-1 flagellin - Salmonella berta (fragment)
C;Species: Salmonella berta
c;Date: 06-Jan-1995 #sequence_revision 06-Jan-1995
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c;Species: Salmonella moscow
C;Date: 06-Jan-1995 #sequence_revision 06-Jan-1995
C;Accession: S33191
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A; Residues: 1-504 < MAS>
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A; Residues: 1-504 < MAS>
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Best Local S
Matches 88
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Best Local :
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96.7%;
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Pred. No. 4e-3
0; Mismatches
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Pred. No. 2.1e-33;
1; Mismatches 1
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     #text_change 26-Aug-1999
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RESULT 7
S33187
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C;Species: Salmonella dublin 
C;Date: 06-Jan-1995 #sequence_revision 
C;Accession: S31188 
R;Masten, B.J.; Joys, T.M.
                                                                                                                                                                                       phase-1 flagellin - Salmonella derby (fragment)
C;Species: Salmonella derby
C;Date: 12-Feb-1998 #sequence_revision 20-Feb-1998 #text_change
C;Accession: S33187
R;Masten, B.J.; Joys, T.M.
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S33188
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A;Molecule type: DNA
A;Residuss: 1-507 «MAS»
A;Cross-references: EMBL:Z15064; NID:g297055; PIDN:CAA78773.1; PID:g297056
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A; Reference number:
A; Accession: S33185
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submitted to the EMBL Data Library, September 1992
A;Description: Molecular analysis of the flagellar antigen complex of Salmonella.
A;Reference number: S33185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          C; Accession: S33185
R; Masten, B.J.; Joy:
                         A;Cross-releter
C;Superfamily:
                                                                A; Molecule type: DNA
A; Residues: 1-504 < MAS>
                                                                                                                  A; Reference number: A; Accession: S33187
                                                                                                                                                     submitted to the EMBL Data Library, a A;Description: Molecular analysis of
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A; Residues: 1-504 < MAS>
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A;Description: Molecular analysis of the flagellar antigen complex of Salmonella
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C; Superfamily: flagellin
                                                 Cross-references:
                                                                                                Status: preliminary
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93.3%;
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93.1%;
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Pred. No. 1.3e-31;
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Pred. No. 8.2e-32;
3; Mismatches 3
 Score
                                                                                                                                                     September 1992
f the flagellar antigen
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Length 504;
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phase-1 flagellin - Salmonella senftenberg (fragment)
C;Species: Salmonella senftenberg
C;Date: 06-Jan-1995 #sequence_revision 06-Jan-1995 #text_change 26-Aug-1999
C;Accession: S33194
R;Masten, B.J.; Joys, T.M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 9
S33194
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submitted to the EMBL Data Library, September 1992
A;Description: Molecular analysis of the flagellar antigen
A;Reference number: S33185
A;Accession: S33186
A;Accession: S33186
A;Accession: Say
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33186
(fragment)
C;Species: Salmonella budapest (fragment)
C;Species: Salmonella budapest
C;Date: 06-Jan-1995 #sequence_revision 06-Jan-1995
C;Accession: S31186
R;Masten, B.J.; Joys, T.M.
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A;Status: prelimina
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                                                                                                                                                                                                                                                                                  Molecule type: DNA
Residues: 1-504 <MAS>
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Best Local (
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                                                                              IATGATDVNAATLOSSKUVYTSVVNGQFTF 90
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Pred. No. 9.2e-30;
3; Mismatches 7;
                                                                                                                                                                                                 Score 394; DB 2;
Pred. No. 3.3e-29;
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R;Dworkin, J.; Tummuru, M.K.; Blaser, M.J.
J. Biol. Chem. 270, 15093-15101, 1995
A;Title: Segmental conservation of sapA sequences in A;Reference number: A56999; MUID:95318069; PMID:77974
A;Accession: I40711
A;Status: preliminary; translated from GB/EMBL/DDBJ
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c;Species: Salmonella oranienburg
C;Date: 06-Jan-1995 #sequence_revision 06-Jan-1995 #text_change 26-Aug-1999
C;Accession: S33192
R;Masten, B.J.; Joys, T.M.
                                                                                                                          sapB protein - Campylobacter fetus
C;Species: Campylobacter fetus
C;Date: 16-Aug-1996 #sequence revision 16-Aug-1996
C;Accession: I40711
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A;Molecule type: DNA
A;Residues: 1-508 <RES>
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A;Title: Recombinational basis of serovar diversity in Salmonella
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C; Superfamily:
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C;Genetics:
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A;Accession: A53465
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C;Species: Salmonella banana
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A; Residues: 1-507 < MAS>
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A; Accession: S33192
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78.9%;
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Pred. No. 2.1e-26;
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                                                                  Campylobacter fetus cells.
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A;Cross-references: GB
A;Experimental source:
C;Genetics:
                                                                          A; Molecule type: DNA
A; Residues: 1-5291 <HAY>
A; Cross-references: GB:B
                                                                                                                                                 DNA Res. 8, 11-22, 2001
A;Title: Complete genome sequence of enterchemorrhagic Escherichia coli O157:H7
A:Reference number: A99629; MUID:21156231; PMID:11258796
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A;Molecule type: DNA
A;Residues: 1-5188 <STO>
A;Cross-references: GB:AE005174; NID:g12513368; PIDN:AAG54838.1; GSPDB:GN00145; UWGP:Z06
A;Experimental source: strain O157:H7, substrain EDL933
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C;Dare: 16-Feb-2001 #sequence_revision 16-Feb-2001 #text_change 14-Sep-2001 C;Accession: B85547 C;Accession: B85547 R;Perna, N.T.; Plunkett III, G.; Burland, V.; Mau, B.; Glasner, J.D.; Rose, Tiller, L.; Grotbeck, E.J.; Davis, N.W.; Lim, A.; Dimalanta, E.; Potamousis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  probable RTX family exoprotein [imported] - Escherichia coli (strain 0157:H7,
C;Species: Escherichia coli
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                                A; Gene:
                                                                                                                                                                                                         gasawara, N.; Yasunaga,
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Nature 409, 529-533, 2001
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A; Residues: 1-936 < RES>
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N.; Yasunaga, T.; Kuhara,
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                                                              GB:BA000007; PIDN:BAB33965.1; PID:g13360000; GSPDB:GN00154
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30.8%;
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Pred. No. 35;
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Pred. No.
Score 83.5;
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Shiba, T.; Hattori,
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M.; Shinagawa, H.
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K.; Ap
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C;Superfamily: flagel1
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A;Experimental source: serotype
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A;Residues: 1-572 <PAR>
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Best Local &
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290
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SIDANGQLLLTSR 302
                                                            ATDVNAATLQSSK 77
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                                                                                                                                                                                                                                                                                 Score 82.5; D
Pred. No. 4.1;
7; Mismatches
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2; Mismatches
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Match Length
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1: sp_archea:*
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Gapop 10.0 , Gapext 0.5
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Q8kyn7 bacillus an	Q8zn57 salmonella	Q9xcj4 salmonella	Q9r954 campylobact		Q8ill5 plasmodium	ש	-	υn				Q8ggi0 escherichia	Q8ggh9 escherichia	Q93es4 escherichia	Q8ggh8 escherichia	Q8ggi2 escherichia			Q9r406 salmonella	Q9r405 salmonella		Q54515 salmonella	-	Q53821 salmonella	Q53995 salmonella	Q53994 salmonella	Q53992 salmonella	Q54414 salmonella

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Best Local Similarity
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EMBL; M84975; AAA27085.1; -.

InterPro; IPR001492; FlagellinN.

InterPro; IPR001029; Flagellin_C.

Pfam; PF00700; Flagellin_C; 1.

Pfam; PF00700; Flagellin_C; 1.

PFANTS; PR00207; FLAGELLIN.

PRODOm; PD000316; Flagellin_C; 2.

SEQUENCE 494 AA; 51732 MW; 1DD4877.
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Q54210;
Q1-NOV-1996 (TrEMBLrel. 01,
01-NOV-1996 (TrEMBLrel. 21,
01-JUN-2002 (TrEMBLrel. 21,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
MEDLINE=93156031; Pubmed=8429538;
Li J., Smith N.H., Nelson K., Cri
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Enterobacteriaceae; Salmonella.
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Pred. No. 7.8e-30;
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Best Local S
Matches 89
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Interpro; IPR001492; Flagellin.V.
Interpro; IPR001029; Flagellin.C.
Pfam; PF00700; Flagellin.C; 1.
Pfam; PF00669; Flagellin.V; 1.
PRINTS; PR00207; FLAGELLIN.
PRODOM; PD000316; Flagellin.C; 2.
SEQUENCE 505 AA; 52912 MW; 3C7;
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SEQUENCE FROM N.A.
MEDLINE=93156031; PubMed=8429538;
Li J., Smith N.H., Nelson K., Crichton
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Q54863;
                          J. Med. Microbiol. 38:129-139(1993).
EMBL; M84978; AAA27088.1;
InterPro; IPR001492; Flagellin.
InterPro; IPR00129; Flagellin.C.
Pfam; PF00700; Flagellin.C; 1.
Pfam; PF00669; Flagellin.N; 1.
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Bacteria; Proteobacteria; Gammaproteobacteria;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Enterobacteriaceae;
NCBI_TaxID=605;
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                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
MEDLINE=93156031; PubMed=8429538;
Li J., Smith N.H., Nelson K., Crichton
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.7e-29;
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Best Local S
Matches 89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.

STRAIN=ATCC 49216;
Masten B.J., JUys T.M.;
Masten B.J., JUys T.M.;
Masten B.J., JUys T.M.;
Submitted (JAN-1994) to the EMBL/Ge
EMBL; U05298; AAA53493.1;-
InterPro; IPR001492; Flagellin.C.
InterPro; IPR001492; Flagellin.C; 1.
Pfam; PF00700; Flagellin.W; 1.
PRINTS; PR00659; Flagellin.W; 1.
PRINTS; PR00207; ELAGELLIN.
ProDom; PD000316; Flagellin_C; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NON TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q53967;
Q53967;
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ProDom; PD000316; Flagellin_C;
SEQUENCE 505 AA; 52942 MW;
                                                           Bacteria; Proteobacteria; Gamma
Enterobacteriaceae; Salmonella
                                                                                                                                                01-NOV-1996 (TrEMBLrel. 01, C
01-NOV-1996 (TrEMBLrel. 01, L
01-JUN-2002 (TrEMBLrel. 21, L
Phase-1 flagellin (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Salmonella enterica subsp. enterica serovar Enteritidis var. dany Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales; Enterobacteriaceae; Salmonella.
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01-NOV-1996 (TremBirel.
01-JUN-2002 (TremBirel.
Phase-1 flagellin (Fragm
SEQUENCE
                                       NCBI_TaxID=592;
                                                                                                        Salmonella
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    FROM N.A.
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                                                                                                        enteritidis.
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MBLrel. 01,
MBLrel. 21, 1
(Fragment).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  98.9%;
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                                                                                    Gammaproteobacteria;
                                                                                                                                                                                        Created)
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Last annotation updat
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Pred. No. 1.7e
1; Mismatches
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3C75770533499C80 CRC64;
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                                                                                                                                                   Query Match
Best Local
                                                                                                                                       Matches
                                                                                                                                                                                                                       STRAIN=ATCC 49219;

Wasten B.J., Joys T.M.;

Wasten B.J., Joys T.M.;

Rasten B.J., Joys T.M.;

Submitted (JAN-1994) to the EMBL/Ge

EMBL; U0529; AAA53494 1;

InterPro; IPR001492; FlagellinN.

InterPro; IPR001029; Flagellin C.

Pfam; PF00700; Flagellin C; 1.

Pfam; PF00669; Flagellin N; 1.

PRINTS; PR00207; FLAGELLIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               J. Bacteriol. 177:1610-1613(1995).
EMBL; U12963; AAA64387.1; ...
InterPro; IPR001492; FlagellinN.
InterPro; IPR001029; Flagellin_C.
Pfam; PF00700; Flagellin_C; 1.
Pfam; PF000669; Flagellin_N; 1.
PRINTS; PR00207; FLAGELLIN.
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NON TER
SEQUENCE
                                                                                                                                                                                     NON TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                          01-NOV-1996 (TrEMBLrel. 01, 01-NOV-1996 (TrEMBLrel. 01, 01-JUN-2002 (TrEMBLrel. 21,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=95189740; PubMed=7533759;
van Asten A.J.A.M., Zwaagstra K.A., Baay M.F.,
Huis in 't Veld J.H.J., van der Zeijst B.A.M. .
"Identification of the domain which determines
flagellin of Salmonella enteritidis.";
                                                                                                                                                                                                                                                                                                                                                                Bacteria; Proteobacteria; Gammaproteobacteria;
Enterobacteriaceae; Salmonella.
                                                                                                                                                                                                                                                                                                                                                                                       Salmonella enterica subsp.
                                                                                                                                                                                                                                                                                                                                                                                                               Phase 1 flagellin (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q53989;
                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=29477;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q53989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRAIN=857;
MEDLINE~95189740;
                                                                                                                                                                                                              ProDom;
                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
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                                                                                                                                                                                                          PD000316; Flagellin_C;
                                                                                                                                                    Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STAGTAEAKAIAGAI KGGKEGDTFDYKGVTFTIDTKTGDDGNGKVSTTINGEKVTLTVAD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STAGTAEAKAIRGAIKGGKEGDTFDYKGVTFTIDTKTGDDGNGKVSTTINGEKVTLTVAD
                                                             IATGATDVNAATLQSSKNVYTSVVNGQFTF
                                                                                                            STAGTABAKAIAGAIKGGKEGDTFDYKGVTFTIDTKTGDDGNGKVSTTINGEKVTLTVAD 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IATGATDVNAATLQSSKNVYTSVVNGQFTF
                                                                                           STAGTAEAKAIAGAIKGGKEGDTFDYKGVTFTIDTKTGNDGNGKVSTTINGEKVTLTVAD 311
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                                                                                                                                      Conservative
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                                                                                                                                                                                      AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             51794 MW;
                                                                                                                                                                                      52849 MW;
                                                                                                                                                   98.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           98.9%;
98.9%;
                                                                                                                                                                                                                                                                                                                                                                                        enterica serovar Essen
                                                                                                                                     Score 446; DB Pred. No. 2.1e-
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                          Created)
Last sequence up
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                                                                                                                                                                                                                                                                                             EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 446; DB 2
Pred. No. 2e-29;
0; Mismatches
                                                                                                                                                                                      AEAA37AAE46E3EEF
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                                             341
                                                                                                                                      DB 2; I
2.1e-29;
les 0;
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                                                                                                                                                                                      CRC64;
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Best Local S
Matches 89
                                  Query Match
Best Local S
Matches 89
                                                                                     InterPro; IPR001492; FlagellinN.
InterPro; IPR001029; Flagellin_C.
Pfam; PF00700; Flagellin_C; 1.
Pfam; PF00669; Flagellin_N; 1.
PRINTS; PR00207; FLAGELLIN.
ProDom; PD000316; Flagellin_C; 2.
NON_TER
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InterPro; IPR001492; FlagellinN.
InterPro; IPR001029; Flagellin_C:
Pfam; PF00700; Flagellin_C: 1.
Pfam; PF00669; Flagellin_N: 1.
PRINTS; PR00207; FLAGELLIN.
ProDom; PD000316; Flagellin_C; 2.
NON_TER
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Q54329;
Q1-NOV-1996
01-NOV-1996
01-JUN-2002
                                                                                                                                                                                                                                                                                                                                           Q53822
Q53822;
                                                                                                                                                                                                                                                   Salmonella enterica subsp. enterica serovar Enteritidis var. chac
Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;
Enterobacteriaceae; Salmonella.
                                                                                                                                                                                                                                                                                             01.NOV-1996 (TrEMBLrel. 01, Created)
01.NOV-1996 (TrEMBLrel. 01, Last sequence up
01-UN-2002 (TrEMBLrel. 21, Last annotation
Phase-1 flagellin (Fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRAIN=ATCC 49221;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Salmonella enterica subsp. Bacteria; Proteobacteria; CEnterobacteriaceae; Salmone
                                                                                                                                                                       STRAIN=ATCC 49214;
Masten B.J., Joys T.M.;
Submitted (JAN-1994) to t.
EMBL; U05297; AAA53492.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Masten B.J., Joys T.M.;
Submitted (JAN-1994) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Phase-1 flagellin FLIC.
                                                                                                                                                                                                                                      NCBI_TaxID=29475;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=29478;
                                                                              SEQUENCE
                                                                                                                                                                                                                    SEQUENCE FROM N.A.
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                                  . Similarity
89; Conserv
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STAGTAEAKAIAGAIKGGKEGDTFDYKGVTFTIDTKTGDDGNGKVSTTINGEKVTLTVAD
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STAGTAEAKAIAGAIKGGKEGDTFDYKGVTFTIDTKTGDDGNGKVSTTINGEKVTLTVAD
                                                                              504
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(TrEMBLrel. 01, Last
(TrEMBLrel. 21, Last
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                        PRELIMINARY;
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                                   Conservative
                                                                              AA;
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                                                                               52849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  98.9%;
                                            98.9%;
                                                                                                                                                                                  to the EMBL/GenBank/DDBJ
                                                                              WW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    . enterica serovar Enteritidis var.
Gammaproteobacteria; Enterobacteri
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Created)
                                  Score 446; DB 2; 1
Pred. No. 2.1e-29;
1; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred. No. 2.1
1; Mismatches
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Pred. No. 2.1e-29;
                                                                                                                                                                                                                                                                                                                                                        PRT;
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                                                                              AEAA37AAE46E3EEF CRC64;
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Enterobacteriales;
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                                                         Length
                                    Indels
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252

STAGTABAKAIAGAIKGGKEGDTFDYKGVTFTIDTKTGNDGNGKVSTTINGEKVTLTVAD

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RESULT ID 77381 ID 77
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Best Local
Matches 8
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Z. Bacteriol. 174:587-3592(1992).

Interpro; PR0001492; Flagellin.

Interpro; PR0001029; Flagellin.C.

Pfam; PF00700; Flagellin.C; 1.

Pfam; PF00669; Flagellin.N; 1.

PRINTS; PR00207; FLAGELLIN.

ProDom; PD000316; Flagellin.C; 2.

SEQUENCE 505 AA; 52951 MW; 01A5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q57381;
01-NOV-1996
01-NOV-1996
01-JUN-2002
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Q53970;
                                                                                                                                                                                                                                                                              Salmonella enteritidis, and Salmonella enterica subsp. enterica serovar Othmarschen. Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriaceae; Salmonella. NCBI_TaxID=592, 34041;
                                                                                                                                          MEDLINE=92276338; PubMed=1592813; Selander R.K., Smith N.H., Li J., Kopecko D.J., Rubin F.A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q57381
                         [2]
                                                                             Kopecko D.J., Rubin F.A.;
"Molecular evolutionary genetics
Salmonella dublin.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "Molecular evolutionary genetics Salmonella dublin.";
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bacteria; Proteobacteria;
Enterobacteriaceae; Salmor
                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           FLIC1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Phase-1
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FLIC1.
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01-JUN-2002
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                                                         174:3587-3592 (1992)
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RESULT Q53583

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Matches 89
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STRAIN=S5334;
MEDLINE=94195780; PubMed=8146152;
A Li J., Nelson K., McWhorter A.C., While the combinational basis of seroyar dimecombinational basis of seroyar dimecombinational Sci. U.S.A. 91:255
                                                                                                                                                                           Query Match
Best Local Similarity
Matches 86; Conserv
                                                                                                                                                                                                                                                        MEDLINE-94195780; PubMed-8146152;
Li J., Nelson K., McWhorter A.C., Whittam T.S., Se "Recombinational basis of serovar diversity in Sall Proc. Natl. Acad. Sci. U.S.A. 91:2552-2556(1994).

EMBL; U06204; AAA17863.1; -..
InterPro; IPR001492; FlagellinN.
InterPro; IPR001029; Flagellin C.
Pfam; PF00700; Flagellin C; 1.
Pfam; PF00707; PIAGELLIN;
PFINTS; PR00207; PLAGELLIN;
PROLOT; PR00207; FLAGELLIN;
PRODOM; PD000316; Flagellin C; 2.
SEQUENCE 508 AA; 53332 MW; 3A6A23F526159B8C CR
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InterPro; IPR001029; Flagellin_C.
Pfam; PF00700; Flagellin_C; 1.
Pfam; PF00669; Flagellin_N; 1.
PRINTS; PR00207; FLAGELLIN.
ProDom; PD000316; Flagellin_C; 2.
SEQUENCE 505 AA; 53011 MW; F99E
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Q53993;
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EMBL; U06455; AAA17869.1; ---
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39; Conservative
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U.S.A. 91:2552-2556(1994).
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Last
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1; Mismatches
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Pred. No. 2
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Submitted (JAN-1994) to the EMBL/Ge
EMBL, U05295; AAA53490.1; -.
InterPro; IPR001492; FlagellinN.
InterPro; IPR001029; Flagellin_C:
Pfam; PF00700; Flagellin_C; 1.
Pfam; PF00669; Flagellin_N:
PRINTS; PR00207; FLAGELLIN.
PRINTS; PR00207; FLAGELLIN.
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InterPro; IPR001029; Flagellin C.
Pfam; PF00700; Flagellin C; 1.
Pfam; PF00669; Flagellin N; 1.
PRINTS; PR00207; FLAGELLIN.
PRINTS; PR00207; FLAGELLIN C; 2.
SEQUENCE 505 AA; 52863 MW; 3A36
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01-NOV-1996
01-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE=94195780; PubMed=8146152;
Li J., Nelson K., McMhorter A.C., Whittam T.S., Selander R.K.;
"Recombinational basis of serovar diversity in Salmonella enterica.";
Proc. Natl. Acad. Sci. U.S.A. 91:2552-2556(1994).
EMBL; U06197; AAA17856.1; --
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Enterobacteriaceae; Salmo
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Matches 81
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EMBL; U06199; AAA17858.1; -.
InterPro; IPR001492; Flagellin.C.
InterPro; IPR001029; Flagellin.C.; 1.
Pfam; PF00700; Flagellin.C; 1.
Pfam; PF00669; Flagellin.N; 1.
PRINTS; PR00207; FLAGELLIN.
Probom; PD000316; Flagellin.C; 2.
SEQUENCE 504 AA; 52804 MW; BF9E
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Q53991;
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Q54489;
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MEDLINE=94195780; PubMed=8146152;
Li J., Nelson K., McWhorter A.C., Whittam T.S., Selander F "Recombinational basis of serovar diversity in Salmonella Proc. Natl. Acad. Sci. U.S.A. 91:2552-2556(1994).
EMBL; U06198; AAA17857.1; -.
InterPro; IPR001492; Flagellin.C.
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Bacteria; Proteobacteria;
Enterobacteriaceae; Salmon
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                                                                                                              NCBI_TaxID=28901;
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Li U., Nelson K., McWhorter A.C., Whittam T.S., Selander F
"Recombinational basis of serovar diversity in Salmonella
Proc. Natl. Acad. Sci. U.S.A. 91:2552-2556(1994).
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DR Pfam; pF00700; Flagellin_N; 1.

DR Pfam; pF00669; Flagellin_N; 1.

DR PRINTS; PR00607; FLAGELLIN.

DR PRINTS; PR003016; Flagellin_C; 2.

SQ SEQUENCE 504 AA; 52932 MW; 000ACFF05AC678FF CRC64;

Query Match
Best Local Similarity 90.0%; pred. No. 5.5e-26;

Matches 81; Conservative 3; Mismatches 6; Indels 0; Gaps 0;

Oy 1 STAGTAEAKAIAGAIKGGKEGDTEDYKGVTFTIDTXTGDDGNGKVSTTINGEKVTLTVAD 60

Db 252 SSAGTAESKAIATAIKGGKEGDTEDYKGVSFTIDTXNGTDGNGTVSTTINGEKVTLTVAD 311

Qy 61 IATGATDVNAATLQSSKNVYTSVVNGQFTF 90

Db 312 ITTGAADVNAATLQSSKNVYTSVVNGQFTF 341

Search completed: January 12, 2004, 11:19:28

Job time: 56 secs
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Result
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    Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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Copyright (c) 1993 - 2004 Compugen Ltd.
 ELIC_SALSE
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ALS4 CANAL
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-I- FUNCTION: FLAGELLIN IS THE SUBUNIT PROTEIN WHICH POLYMERIZES TO FORM THE FILAMENTS OF BACTERIAL FLAGELLA SEROTYPES USUALLY ALTERNATE BETWEEN THE PRODUCTION OF 2 ANTIGENIC FORMS OF FLAGELLA, TERMED PHASE-1 AND PHASE-2, EACH SPECIFIED BY SEPARATE STRUCTURAL GENES.
-I- SIMILARITY: BELONGS TO THE BACTERIAL FLAGELLIN FAMILY.
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EMBL; Z15067; CAA78776.1; -.
InterPro; IPR001029; Flagellin C
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Masten B.J., Joys T.M.;
"Molecular analyses of the Salmonella
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01-OCT-1996 (Rel. 34, Created)
01-OCT-1996 (Rel. 34, Last sequence up
30-MAY-2000 (Rel. 39, Last annotation
Flagellin (Phase-1-C flagellin).
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Pfam; PF00669; Flagellin_N; 1.
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NCBI_TaxID=98360;
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Enterobacteriaceae, Salmonella.
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Flagellin (Phase-1-C flagellin).
FLIC.
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INIT_MET
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                         Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriaceae; Salmonella.
                                                  Salmonella moscow
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InterPro; IPR001492; Flagellin_C.
Pfam; PF00700; Flagellin_C; 1.
Pfam; PF00669; Flagellin_N; 1.
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MISCELLANGOUS: INDIVIDUAL SALMOLTER SEROTYPES USUALLY ALTERNATE BETWEEN THE PRODUCTION OF 2 ANTIGENIC FORMS OF FLAGELLA, TERMED PHASE-1 AND PHASE-2, EACH SPECIFIED BY SEPARATE STRUCTURAL GENES.

SIMILARITY: BELONGS TO THE BACTERIAL FLAGELLIN FAMILY.
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996 (Rel. 34,
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Pred. No. 2.7e-33;
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RESULT 5
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J. Bacteriol. 175:5359-5365(1993)
J. Bacteriol. 175:5359-5365(1993)
J. FLAGELLIN IS THE SU
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InterPro; IPR001492; Flagellin
Pfam; PF00700; Flagellin C; 1.
Pfam; PF00669; Flagellin N; 1.
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01-OCT-1996 (Rel. 34, Last sequence update)
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Flagellin (Phase-1-C flagellin).
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                                                                                                                                                                       SEQUENCE FROM N.A.
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                                                                                                                                                                                                               Enterobacteriaceae;
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FORM THE FILAMENTS OF BACTERIAL FLAGELLA SEROTYPES USUALLY ALTERNATE BETWEEN THE PRODUCTION OF 2 ANTIGENIC FORMS OF FLAGELLA, TERMED BHASE-1 AND PHASE-2, EACH SPECIFIED BY SEPARATE STRUCTURAL GENES.

SIMILARITY: BELONGS TO THE BACTERIAL FLAGELLIN FAMILY.
    FUNCTION: FLAGELLIN IS THE SUBUNIT PROTEIN WHICH POLYMERIZES TO FORM THE FILAMENTS OF BACTERIAL FLAGELLA.

MISCELLANEOUS: INDIVIDUAL SALMONELLA SEROTYPES USUALLY ALTERNATE BETWEEN THE PRODUCTION OF 2 ANTIGENIC FORMS OF FLAGELLA, TERMED PHASE-1 AND PHASE-2, EACH SPECIFIED BY SEPARATE STRUCTURAL GENES
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InterPro; IPR001029; FlagellinN.
InterPro; IPR001492; FlagellinN.
Pfam; PF00700; Flagellin_C; 1.
Pfam; PF00669; Flagellin_N; 1.
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"Detection and typing of Salmonella flic gene by PCR-RFLP for
diagnosis of bovine salmonellosis.";
Submitted (DEC-1995) to the EMBL/GenBank/DDBJ databases.
-!- FUNCTION: FLAGELLIN IS THE SUBUNIT PROTEIN WHICH POLYMERIZES TO
FORM THE FILAMENTS OF BACTERIAL FLAGELLA SEROTYPES USUALLY ALTERNATE
BETWEEN THE PRODUCTION OF 2 ANTIGENIC FORMS OF FLAGELLA, TERMED
PHASE-1 AND PHASE-2, EACH SPECIFIED BY SEPARATE STRUCTURAL GENES.
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MEDILINE=94195780; PubMed=8146152;
Li J., Nelson K., McWhorter A.C., Whittam T.S., Selander R.K.;
"Recombinational basis of serovar diversity in Salmonella enterica.";
Proc. Natl. Acad. Sci. U.S.A. 91:2552-2556(1994).
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MEDLINE-93374829; PubMed-7690024;
Masten B.J., Joys T.M.;
"Molecular analyses of the Salmon
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                                                                                                                                                                                                                                                                                                                                                                                                                                Bacteriol. 175:5359-5365(1993).

- FUNCTION: FLACELLIN IS THE SUBUNIT PROTEIN WHICH POLYMERIZES TO FORM THE FILAMENTS OF BACTERIAL FLACELLA.

- MISCELLANGOUS: INDIVIDUAL SALMONBLLA SEROTYPES USUALLY ALTERNATE BETWEEN THE PRODUCTION OF 2 ANTIGENIC FORMS OF FLACELLA, TERMED PHASE-1 AND PHASE-2, EACH SPECIFIED BY SEPARATE STRUCTURAL GENES.

- SIMILARITY: BELONGS TO THE BACTERIAL FLAGELLIN FAMILY.
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9, Last annotation of the flagellin of the
  53145 MW;
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Best Local :
                                                                                             Flagella.
INIT MET
SEQUENCE
                                                                                                                                                           InterPro; IPR001029; Flagellin C.
InterPro; IPR001492; FlagellinN.
Pfam; PF00700; Flagellin C; 1.
Pfam; PF00669; Flagellin N; 1.
PRINTS; PR00207; FLAGELLIN.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE=93374829; PubMed=7690024; Masten B.J., Joys T.M.; "Molecular analyses of the Salmon
                                                                                                                                                                                                                                                                                 EMBL; U06225; AAA17866.1;
EMBL; Z15066; CAA78775.1;
                                                                                                                                                                                                                                                                                                                                                      use by non-profit institutions as long modified and this statement is not remove entities requires a license agreement (so or send an email to license@isb-sib.ch).
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MEDLINE=93374829;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE-94195780; PubMed-8146152;
Li J., Nelson K., McWhorter A.C., Whittam T.S., Son Recombinational basis of serovar diversity in Sal Proc. Natl. Acad. Sci. U.S.A. 91:2552-2556(1994).
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                                                                                                                                                                                                                                                                                                                                                                    s SWISS-PROT entry is copyright. It is produced through a collaboration ween the Swiss Institute of Bioinformatics and the EMBL outstation—Buropean Bioinformatics Institute. There are no restrictions on its by non-profit institutions as long as its content is in no way ified and this statement is not removed. Usage by and for commercial ities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FUNCTION: FLAGELLIN IS THE SUBUNIT PROTEIN WHICH POLYMERIZES TO FORM THE FILAMENTS OF BACTERIAL FLAGELLA.

MISCELLANEOUS: INDIVIDUAL SALMONELLA SEROTYPES USUALLY ALTERNATE BETWEEN THE PRODUCTION OF 2 ANTIGENIC FORMS OF FLAGELLA, TERMED PHASE-1 AND PHASE-2, EACH SPECIFIED BY SEPARATE STRUCTURAL GENES.

SIMILARITY: BELONGS TO THE BACTERIAL FLAGELLIN FAMILY.
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  84; Conservative
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InterPro; iPR001492; FlagellinN.
Pfam; PF00700; Flagellin C; 1.
Pfam; PF00669; Flagellin N; 1.
PRINTS; PR00207; FLAGELLIN.
                                                                                                                                                                                                                                                                                                                                                                                                            This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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PIR; S33186; S33186.
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01-OCT-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
MEDLINE=93374829; PubMed=7690024;
Masten B.J., Joys T.M.;
"Molecular analyses of the Salmonella
                                                                                                                                                                                                                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                complex."
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01-OCT-1996 (Rel. 34, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation updat
Flagellin (Phase-1-C flagellin).
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Enterobacteriaceae; Salmonella.
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- FUNCTION: FLAGELLIN IS THE SU
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MISCELLANBOUS: INDIVIDUAL SALMONELLA SEROTYPES USUALLY ALTERNATE
BETWEEN THE PRODUCTION OF 2 ANTIGENIC FORMS OF FLAGELLA, TERMED
PHASE-1 AND PHASE-2, EACH SPECIFIED BY SEPARATE STRUCTURAL GENES
SIMILARITY: BELONGS TO THE BACTERIAL FLAGELLIN FAMILY.
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52790 MW;
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RESULT 11
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Q06974;
01-OCT-1996 (Rel. 3
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              "Molecular analyses complex.";
                                          STRAIN=ATCC 9239;
MEDLINE=93374829;
Masten B.J., Joys
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                                                                                       SEQUENCE FROM N.A.
                                                                                                                                 Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriaceae; Salmonella.
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INIT MET
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PIR; S33194; S33194.
InterPro; IPR001029; Flagellin C.
InterPro; IPR011492; FlagellinN.
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                                                                                                                  NCBI_TaxID=28147;
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-!- MISCELLANEOUS: INDIVIDUAL SALMONELLA SEROTYPES USUALLY ALTERNATE BETWEEN THE PRODUCTION OF 2 ANTIGENIC FORMS OF FLAGELLA, TERMED PHASE-1 AND PHASE-2, EACH SPECIFIED BY SEPARATE STRUCTURAL GENES.
-!- SIMILARITY: BELONGS TO THE BACTERIAL FLAGELLIN FAMILY.
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Masten B.J., Joys T.M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bacteria, Proteobacteria, Gammaproteobacteria, Enterobacteriales, Enterobacteriaceae, Salmonella.
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 Bacteriol.
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PF00669; Flagellin_N; 1.
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96 (Rel. 34, Last sequence up
00 (Rel. 39, Last annotation
(Phase-1-C flagellin).
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T.M.;
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15-JUL-1999 (Rel. 3
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                                                                             This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EN the European Bioinformatics Institute. There are no restuse by non-profit institutions as long as its content modified and this statement is not removed. Usage by and
                                                                                                                                                                                                              MEDLINE=98440424; PubMed=9765564;
Hoyer L.L., Payne T.L., Hecht J.E.;
Hoyer L.L., Payne T.L., Hecht J.E.;
"Identification of Candida albicans ALS2 and ALS4 and local
als proteins to the fungal cell surface.";
J. Bacteriol. 180:5334-5343(1998).
-!- FUNCTION: MAY PLAY A ROLE IN ADHESION AND PATHOGENESIS.
-!- PTM: N-GLYCOSYLATED AND O-GLYCOSYLATED (POTENTIAL).
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Eukaryota; Fungi; Ascomyc
Saccharomycetales; mitosp
NCBI_TaxID=5476;
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or send an
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INIT_MET
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PIR; S33192; S33192.

InterPro; IPR001029; Flagellin C
InterPro; IPR001492; Flagellin C
Pfam; PF00700; Flagellin C; 1.

Pfam; PF00669; Flagellin N; 1.
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                                     requires a license agreement (S
an email to license@isb-sib.ch).
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AAC64239.1;
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38, Last sequence update)
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RESULT 13
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P56964; Q9PI
16-OCT-2001
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SIGNAL
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NON TER
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"The genome sequence of the food-borne pathogen Campylobacter jejuni
                                                                                                  Flagella;
INIT_MET
                                                                                                                                               Pfam; PF00700; Flagellin_C; Pfam; PF00669; Flagellin_N; PRINTS; PR00207; FLAGELLIN.
                                                                                                                                                                                                                                                                EMBL; AL139078; CAB73765.1; -. PIR; G81277; G81277.
                                                                                                                                                                                                                                                                                                                                                                                    between the Swiss Institute of Bioinformatiche European Bioinformatics Institute. Then use by non-profit institutions as long a modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                          This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           reveals hypervariable sequences.";
Nature 403:665-668(2000)
-1-FUNCTION: FLAGELLIN IS THE SUBUNIT PROTEIN
FORM THE FILAMENTS OF BACTERIAL FLAGELIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRAIN=NCTC 11168;
MEDLINE=20150912;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Campylobacter jejuni.
Bacteria; Proteobacteria; Epsilonproteobacteria; Campylobacterales;
Campylobacteraceae; Campylobacter.
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16-OCT-2001 (Rel. 40,
16-OCT-2001 (Rel. 40,
                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                  entities
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -!- SUBUNIT: HETEROPOLYMER OF FLAA AND FLAB.-!- SIMILARITY: BELONGS TO THE BACTERIAL FLAGELLIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM
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                                                                                                                                                                                                                   InterPro; IPR001029; Flagellin C.
       Local
                                                                                                                                                                                                                                                                                                                                    tities requires a license agreement (S send an email to license@isb-sib.ch).
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       Similarity
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                                                                           571 AA;
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1 17 POTENTIAL.
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  Score 82.5;
Pred. No. 2;
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Pred. No. 1.6;
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                                                                           ACE2D9B300F05053 CRC64;
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                                                                                                  SIMILARITY
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(See http://www.isb-sib.ch/announce/
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TAEAKAIAGAIKGGKEGDTFDYKGVTFTIDTKTGDDGNGKVSTTINGEKVTLTVADIATG

Matches

25;

Conservative

7;

Mismatches

36;

Indels

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Gaps

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RESULT 15
FLA1_CAMJE
ID FLA1_C
AC P56963
DT 16-OCT
DT 16-OCT
DT 16-OCT
DT Flagel
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Best Local S
Matches 31
        FLA1_CAMJE STANDARD;
P55963; Q9PMW0;
16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last seq
16-OCT-2001 (Rel. 40, Last ann
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P35827;
01-JUN-1994
                                                                                                                                                                                                                                                                                                                                                            This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
  Flagellin A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            J. Biol.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=91035477; PubMed=2229082;
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Bacteria; Proteobacteria;
Campylobacteraceae; Campyl
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01-JUN-1994 (Rel. 29, Last sequence update)
01-OCT-1994 (Rel. 30, Last annotation updats)
S-layer protein (Surface array protein) (SA
                                                                                                                                                                                                                                                                                                                                EMBL; J05577; AAA23032.1; -.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "Surface array structure.";
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STRAIN=84-32 / 23D;
MEDLINE=90354448; PubMed=2387868;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Biol. Chem.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FUNCTION: THE S-LAYER IS A PARACRYSTALLINE MONO-LAYERED ASSEMBLY OF PROTEINS WHICH COAT THE SURFACE OF BACTERIA. THIS PROTEIN IS CRITICAL FOR VIRULENCE.
                                                                                                                                    836 NAGDKI--DIADAKNGTFTFNKITMNSDANLDDYITKAVAG 874
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                                                                                                                                                                                          TFDASAITLGANATIKGGSGADSITVKGGNIVVDLVAGGDDTITLKKGAEKTDITTVNNF
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933 AA;
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                                                                                                                                                                                                                                               18.3%;
ilarity 30.7%;
Conservative
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n. 265:19372-19372(1990).
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                                                                                                                                                                                                                                                                                                      96757 MW;
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             Last sequence update)
Last annotation updat
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                                                                                                                                                                                                                                               Score 82.5; Di
Pred. No. 3.2;
9; Mismatches
                                                                  PRT;
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Search completed: January 12, 2004, Job time: 20 secs

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                                                                                                                                                              Query Match
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InterPro; IPRO01029; Flagellin C.

InterPro; IPR001492; Flagellin C.

Pfam; PF00700; Flagellin C; 1.

Pfam; PF00669; Flagellin N; 1.

PRINTS; PR00207; FLAGELLIN.

PRODOM; PD000316; Flagellin C; 2.

Flagella; Complete proteome.

INIT_MET 0 0 BY SIM
                                                                                                                                                                                                                                                                                                                                                                                           the European Bioinformatics Institute. The use by non-profit institutions as long of modified and this statement is not removed. entities requires a license agreement (See lor send an email to license@isb-sib.ch).
                                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Whitehead S., Barrell B.G.; Whitehead S., Barrell B.G.; "The genome sequence of the food-borne pathogen Campylobacter jejuni reveals hypervariable sequences."; Nature 403:665-668(2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDIINE=20150912; PubMed=10688204; Retley J.M., Churcher C., Parkhill J., Wren B.W., Mungall K., Ketley J.M., Churcher C., Basham D., Chillingworth T., Davies R.M., Feltwell T., Holroyd S. Basham D., Karlyshev A.V., Moule S., Pallen M.J., Penn C.W., Quail M.A., Rajandream M.A., Rutherford K.M., van Vliet A.H.M., Whitehead S., Barrell B.G.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Campylobacter jejuni.
Bacteria; Proteobacteria; Epsilonproteobacteria; Campylobacterales;
Campylobacteraceae; Campylobacter.
NCBI_TaxID=197;
                                                                                                                                                                                                                                                                                                                                                                 EMBL; AL139078; CAB73766.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -!- SUBUNIT: HETEROPOLYMER OF FLAA AND FLAB.
-!- SIMILARITY: BELONGS TO THE BACTERIAL FLAGELLIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FLAA OR CJ1339C.
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                                                                                                                                                  Local
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288
                                                                234 TVETRGIA-AVRAGATSDTFAINGVKIGKVDYKDG-DANGALVAAINSVKDTTGV----E
                               64 GATDVNAATLQSSK
                                                                                                                              26;
                                                                                             5 TAEAKAIAGAIKGGKEGDTFDYKGVTF-TIDTKTGDDGNGKVSTTINGEKVTLTVADIAT 63
                                                                                                                                                  Similarity
ASIDANGQLLLTSR
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                                                                                                                                Conservative
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                                                                                                                              Score 78.5; DE Pred. No. 4.6; 8; Mismatches
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                                                                                                                                                                                                 9C63B2A10C1AE863 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                noved. Usage by and for commercial (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PROTEIN WHICH POLYMERIZES
                                                                                                                                                                                                                                                                                                                                                                                                                             There are no restrictions ng as its content is in ved. Usage by and for con
                                                                                                                                                            DB 1;
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Result
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Listing first 45 summaries
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         Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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Gapop 10.0 , Gapext 0.
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1 STAGTAEAKAIAGAIKGGKE.....ATLQSSKNVYTSVVNGQFTF 90
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181.332 Million cell updates/sec
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1: /cgn2_6/ptodata/1/iaa/5A_COMB.pep:*
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     GenCore version 5.1.6 (c) 1993 - 2004 Compugen Ltd
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 US-09-206-942-35
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US-08-728-470-10
US-08-719-641-10
US-08-617-697-10
US-09-317-155-33
US-09-313-47-36
US-09-268-347-36
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Sequence 35, Appl Sequence 37, Appl Sequence 38, Appl Sequence 28, Appl Sequence 9, Appli Sequence 10, Appli Sequence 10, Appli Sequence 10, Appli Sequence 4, Appli Sequence 4, Appli Sequence 33, Appli Sequence 33, Appli Sequence 4, Appli Sequence 4, Appli Sequence 33, Appli Sequence 47, Appli Sequence 41, Appli Sequence 53, Appli Sequence 57, Appli Seq
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्राळाल करकर हारू छ	ALIGNMENTS RESULT 1 US-09-206-942-35 ; Sequence 35, Application US/09206942 ; Patent No. 6432669 ; GENERAL INFORMATION: ; APPLICANT: LOOSMORE, Sheena M. ; APPLICANT: LOOSMORE, Sheena M. ; APPLICANT: Yang, Yan-Ping ; APPLICANT: Yang, Yan-Ping ; APPLICANT: Yang, Yan-Ping ; APPLICANT: Yang, No.chel H. ; TITLE OF INVENTION: Molecular Weight Proteins ; TITLE OF INVENTION: Molecular Weight Proteins ; FILE REFERENCE: 1038-861 MIS:jb ; CURRENT TILING DATE: 1998-12-08 ; EARLIER APPLICATION NUMBER: US/09/206,942 ; CURRENT FILING DATE: 1998-10-07 ; NUMBER OF SEQ ID NOS: 95 ; SOFTWARE: Patentin Ver. 2.1 ; SEQ ID NO 35 ; LENGTH: 915	28 76.5 17.0 1010 4 US-09-206-942-55 Sequence 55, Appl 29 76 16.9 1094 4 US-09-268-347-32 Sequence 32, Appl 30 76 16.9 1180 4 US-09-206-942-65 Sequence 65, Appl 31 76 16.9 1180 4 US-09-206-942-63 Sequence 65, Appl 32 76 16.9 1477 1 US-08-032-832-4 Sequence 4, Appli 33 76 16.9 1477 2 US-08-302-832-4 Sequence 4, Appli 35 76 16.9 1477 2 US-08-302-832-4 Sequence 4, Appli 36 76 16.9 1477 2 US-08-728-470-4 Sequence 4, Appli 37 76 16.9 1477 2 US-08-728-470-4 Sequence 4, Appli 38 76 16.9 1477 2 US-08-728-470-4 Sequence 4, Appli 39 75.5 16.7 626 3 US-08-961-083-106 Sequence 4, Appli 40 75.5 16.7 626 4 US-09-536-784-106 Sequence 106, Appli 40 75.5 16.7 626 4 US-09-536-784-106 Sequence 106, Appli 41 75.5 16.7 626 4 US-09-536-784-106 Sequence 106, Appli 42 75 16.6 992 4 US-09-206-942-61 Sequence 67, Appli 42 75 16.6 998 4 US-09-206-942-61 Sequence 67, Appli 50 16.5 658 3 US-08-685-467-5 Sequence 5, Appli 50 16.5 658 3 US-08-685-467-5
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TITLE OF

INVENTION: Molecular Weight Proteins

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CURRENT FILING DATE: 1998-12-08
EARLIER APPLICATION UNMBER: 09/167,568
EARLIER FILING DATE: 1998-10-07
NUMBER OF SEQ ID NOS: 95
SOFTWARE: PATENTIN VEY: 2.1
SEQ ID NO 37
                                                                                                                                                                                                                                                                                        Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                          SEQ ID NO 34
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Patent No. 6432669
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CURRENT FILING DATE: 1998-12-08
EARLIER APPLICATION NUMBER: 09/167,568
EARLIER FILING DATE: 1998-10-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: Protective Recombinant Haemophilus Influenzae High
TITLE OF INVENTION: Molecular Weight Proteins
FILE REFERENCE: 1038-861 MIS:jb
                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE: PatentIn Ver. 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQ ID NOS: 95
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APPLICANT: Klein, Michel H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Loosmore, Sheena M.
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                                                                                                                                                                                                                                                                                                                                                            TYPE: PRT ORGANISM: Haemophilus influenzae
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28,
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Application US/09206942
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US-09-206-942-26
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Best Local Similarity
Matches 35; Conserv
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SOFTWARE: PATENTIN VET. 2.1
SEQ ID NO 26
LENGTH: 1226
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SEQ ID NO 28
LENGTH: 1220
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Patent No. 6432669
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION: Protective Recombinant Haemophilus Influenzae High TITLE OF INVENTION: Molecular Weight Proteins FILE REFERENCE: 1038-861 MIS:jb CURRENT APPLICATION NUMBER: US/09/206,942 CURRENT FILING DATE: 1998-12-08 EARLIER APPLICATION NUMBER: 09/167,568 EARLIER FILING DATE: 1998-10-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION: Protective Recombinant Haemophilus Influenzae High TITLE OF INVENTION: Molecular Weight Proteins FILE REFERENCE: 1038-861 MIS:jb CURRENT APPLICATION NUMBER: US/09/206,942 CURRENT FILING DATE: 1998-12-08 EARLIER APPLICATION NUMBER: 09/167,568 EARLIER FILING DATE: 1998-10-07 NUMBER: 095 ID NOS: 95
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                                                                                                                                                                                                                                                                LENGTH: 12
TYPE: PRT
ORGANISM:
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 64 GATDVNAATLQSSKNVYTSVVNGQ 87
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                                                                                                       ATIGSVEVTAKTGDIKGGIESNSGNVNITASGDTLNVSNITGQNVTVAAASGAVTTTKGS
                                   TINATTGNANITTKTGEINGEVKSASGNVNITASGNTLNVSNITGQNVTVTANSGAITTT
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                                                                                                                                                                        20.1%; Score 90.5; DB ilarity 24.3%; Pred. No. 0.069; Conservative 15; Mismatches
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                                                                       ----FTIDTKTGD-----DGNGKVSTT----
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Pred. No. 0.069;
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                                                                     ---INGEKVTLTV---ADIAT
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RESULT 7
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US-08-728-470-9
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: US 08/
FILING DATE: 16-MAR-1993
PRIOR APPLICATION UMBER: US PCT
FILING DATE: 16-MAR-1993
PRIOR APPLICATION DATA:
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APPLICANT: Barenk
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE/DOCKET NUMBER: 1038-633
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703) 415-0810
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TITLE OF INVENTION: High Molecular Weight Surface Proteins
TITLE OF INVENTION: of No. 5928651-Typeable Haemophilus
NUMBER OF SEQUENCES: 10
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                                                                                                                                                                                                                                                                                                                                                                                   TYPE: amino acid
STRANDEDNESS: sir
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: Berkstresser, Jerry W
REGISTRATION NUMBER: 22,651
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CITY: Arlington
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                                                                   1055
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Y: U.S.A.
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    Shoemaker and Mattare, Ltd.
    Jefferson Davis Hwy., 1203 Crystal Plaza

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linear
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16-MAR-1992
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Sequence 10, Application US/08728470
PATCHI NO. 5928651
GENERAL INFORMATION:
APPLICANT: Barenkamp, Stephen J
TITLE OF INVENTION: High Molecular Weight Surface Proteins
TITLE OF INVENTION: of No. 5928651-Typeable Haemophilus
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
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GENERAL INFORMATION:
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 16-MAR-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: GB 9:
FILING DATE: 16-MAR-1992
ATTORNEY/AGENT INFORMATION:
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FILING DATE: 16-SEP-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US PCT/US93/0
FILING DATE: 16-MAR-1993
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COMPUTER: IBM PC compatible
OPERATURG SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/719,641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME: Berkstresser, Jerry W
REGISTRATION NUMBER: 22.561
REFERENCE/DOCKET NUMBER: 10:
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703) 415-0810
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PRIOR APPLICATION DATA:
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STREET: Bldg.
CITY: Arlingto:
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    Shoemaker and Mattare, Ltd.
    2001 Jefferson Davis Hwy., 1203 Crystal Plaza

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High Molecular Weight Surface Proteins
of No. 6218141-Typeable Haemophilus
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 86.5; DB Pred. No. 0.23;
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                                                                                                                     GENERAL INFORMATION: APPLICANT: Barenk
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE/DOCKET NUMBER: 10
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703) 415-0810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                              NUMBER OF SEQUENCES: 10
CORRESPONDENCE ADDRESS: Shoemaker and Mattare, Ltd.
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FILING DATE: 16-MAR-1992
ATTORNEY/AGENT INFORMATION:
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                                                                              APPLICANT: Barenkamp, Stephen J
TITLE OF INVENTION: High Molecular Weight Surface Proteins
TITLE OF INVENTION: of No. 6218141-Typeable Haemophilus
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PRIOR APPLICATION DATA:
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   STREET:
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REGISTRATION NUMBER: 22,651
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TRY: U.S.A.
22202-0286
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Similarity 25.4%;
31; Conservative 10
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2001 Jefferson Davis Hwy., 1203 Crystal Plaza
Bldg. 1
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2001 Jefferson Davis Hwy., 1203 Crystal Plaza
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                                                                                                                                                                                                                                                                                      Sequence 9, Application US/08617697 Patent No. 5977336
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity
                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
COMPUTER REALABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
                                                                                                                                                                                                                 APPLICANT: Barenkamp, Stephen J
TITLE OF INVENTION: High Molecular Weight Surface Proteins
TITLE OF INVENTION: of No. 5977336-Typeable Haemophilus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME: Berkstresser, Jerry W
REGISTRATION NUMBER: 22,651
REFERENCE/DOCKET NUMBER: 10
TELECOMMUNICATION INFORMATION:
TELECHONE: (703) 415-0810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 16-MAR-1992
ATTORNEY/AGENT INFORMATION:
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PRIOR APPLICATION DATA:
APPLICATION NUMBER: 1
FILING DATE: 16-MAR-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/719,641
                                                                                                                                                                               NUMBER OF SEQUENCES: 1
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APPLICATION NUMBER:
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                                                                                                    STREET: 2001 Jef:
STREET: Bldg. 1
CITY: Arlington
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TELEPHONE: (/03) /
                                                         COUNTRY: U.S.A. ZIP: 22202-0286
                                                                                           STATE:
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TOPOLOGY: linear
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COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                    ADDRESSEE:
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                                                                                           Virginia
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                                                                                                                                              2001 Jefferson Davis Hwy., 1203 Crystal Plaza
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                                                                                                                                                              Shoemaker and Mattare, Ltd
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US-08-617-697-10
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GENERAL INFORMATION:
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                                                          NFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/302,832
FILING DATE: 05-OCT-1994
                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION:
TITLE OF INVENTION:
NUMBER OF SEQUENCES:
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CLASSIFICATION: 424

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 08/302,832

APPLICATION NUMBER: 05-0CT-1994
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REGISTRATION NUMBER: 22,651
REFERENCE/DOCKET NUMBER: 10:
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703) 415-0810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 05-OCT-PRIOR APPLICATION DATA:
APPLICATION NUMBER: 1
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FILING DATE: 16-MAR-1993
ATTORNEY/AGENT INFORMATION:
NAME: RAPPARENTIAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: Patentin Release #1.0, CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/617,69° FILING DATE: 01-APR-1996
                                                 APPLICATION NUMBER: FILING DATE: 01-APICLASSIFICATION: 42
                                                                                                                                                                                                                                                          STREET: 2001 Jefferson Davis Hwy., 1203 Crystal Plaza STREET: Bldg. 1
CITY: Arlington
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STRANDEDNESS: single
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SOFTWARE: Patent1
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Y: U.S.A.
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ENTION: High Molecular Weight Surface Proteins
JENTION: of No. 5977336-Typeable Haemophilus
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                                                                                                                                                                                                                                                                                                        COUNTRY: US.,
ZIP: 94111-4187
ZIP: 94111-4187
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
MEDIUM TYPE: Floppy disk
MEDUTER: IBM PC compatible
TOWNEUTER: TWOTEM: PC-DOS/MS-DOS
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                                                                   TELEFAX: (415) 398-3249
TELEX: 910 277299
INFORMATION FOR SEQ ID NO: 4:
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INFORMATION FOR SEQ ID NO: 10:
SEQUENCE CHARACTERISTICS:
LENGTH: 1600 amino acids
                                                                                                                                                                                                                                          COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOCTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/409,995
FILING DATE: 24-MAR-1995
CLASSIFICATION:
                                                     SEQUENCE CHARACTERISTICS:
                                                                                                                             TELECOMMUNICATION INFORMATION: TELEPHONE: (415) 781-1989
                                                                                                                                                                                  ATTORNEY/AGENT INFORMATION:
NAME: Silva, Robin M.
REGISTRATION NUMBER: 38,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES:
CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Barenkamp, Stephen I.
APPLICANT: St. Geme III, Joseph W.
TITLE OF INVENTION: Haemophilus Adhesion Proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
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TELECOMMUNICATION INFORMATION:
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APPLICATION NUMBER: US POSITIONING DATE: 16-MAR-1993
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: amino a STRANDEDNESS:
           TYPE: amino acid
                                                                                                                                                                  REFERENCE/DOCKET NUMBER:
STRANDEDNESS:
                                                                                       TELEPHONE: (415) ...
TELEPHONE: (415) 398-3249
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nes 31; Conserv
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REGISTRATION NUMBER: 22,651
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Four Embarcadero Center, Suite 3400
                             1912 amino acids
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double
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US-08-685-467-4
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                                                                                                                                 Matches
                                                                                                                                             Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 4, Application US/08685467 Patent No. 6060059
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Best Local Similarity 39.1%;
Matches 25; Conservative
                                                                                                                                                                                                                                                                                                TELEX: 910 277299
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/409,995
FILING DATE: 24-MAR-1995
ATTORNEY/AGENT INFORMATION:
NAME: Silva, Robin M.
REGISTRATION NUMBER: 38,304
REFERENCE/DOCKET NUMBER: A-61053-2/:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
APPLICANT: St. Ge
                                                                                                                                                                                                                 MOLECULE TYPE:
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC comparible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES: 6
CORRESPONDENCE ADDRESS:
ADDRESSE: Flehr, Hohbach, Test, Albritton & Herbert
STREET: Four Embarcadero Center, Suite 3400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STREET: FOUL LONG CITY: San Francisco STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION:
                                                                                                                                                                                                                                   TYPE: amino acid STRANDEDNESS: unl TOPOLOGY: unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: US/08/685,467
FILING DATE: 22-JUL-1996
                                                                                                                                                                                                                                                                                  LENGTH:
                                                                                                                                                                                                                                                                                                                                                 TELEPHONE: (415) 781-1989
TELEFAX: (415) 398-3249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CLASSIFICATION:
                                                       1435 SATVSDKLSIGT-NGNKVNITSDTKGLNFAKDSKTGDDAN----IHLNGIASTLTDTLLN 1489
1490 SGAT 1493
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                               TGAT 66
                                                                                       AGTABAKAIAGAIKGGKEGDTFDYKGVTFTIDTKTGDDGNGKVSTTINGEKVTLTVADIA 62
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Barenkamp, Stephen J.
VENTION: HAEMOPHILUS ADHESION PROTEINS
                                                                                                                               Conservative
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Pred. No. 0.5;
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Best Local Similarity
Matches 25; Conserva
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US-09-377-155-33
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SOFTWARE: Pate
SEQ ID NO 33
PRIGTH: 2353
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Patent No. 6200578
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APPLICANT: St. Gen
APPLICANT: Barenk
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APPLICATION NUMBER: PCT/US
FILING DATE: 22-MAR-1996
ATTORNEY/AGENT INFORMATION:
NAME: Vance, Dolly A.
REGISTRATION NUMBER: 39,05
REFERENCE/DOCKET NUMBER: 1
                                                                                                             CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/
FILING DATE: 24-MAR-1995
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILE REFERENCE: 065064/0128
CURRENT APPLICATION NUMBER: US/09/377,155
CURRENT FILLING DATE: 1999-08-19
PRIOR APPLICATION NUMBER: PCT/AU98/01031
PRIOR FILING DATE: 1998-12-14
PRIOR APPLICATION NUMBER: GB 9726398.2
PRIOR FILING DATE: 1997-12-12
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TYPE: PRT
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                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: PC-DOS/MS-DOS
Operating System: PC-DOS/MS-DOS
                                                                                                                                                                                                               SOFTWARE: PatentIn Release #1.0, Version #1.30 CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/913,942 FILING DATE: 29-DEC-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION: HABMODHILUS ADHESION PROTEINS NUMBER OF SEQUENCES: 19
CORRESPONDENCE ADDRESS:
ADDRESSEE: Flehr Hobbach Test Albritton & Herbert LLP
                                                                                                                                                                                                                                                                                                                                                                                                 COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                       STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                      CITY: San Francisco
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                                                                                                                                                                                                                                                                                                                                                                                                                                                       Four Embarcadero Center, Suite 3400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Application US/09377155
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WENTION: HAEMOPHILUS ADHESION PROTEINS
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ilarity 39.1%;
Conservative
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                      39,054
  A-61053-1/RFT/RMS/DAV
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Pred. No. 0.67;
6; Mismatches 28;
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Gaps

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TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 781-1989
TELEPHONE: (415) 398-3249
TELETA: (415) 49
TELETA: (416) 49
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Result
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Maximum DB
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1 STAGTAEAKAIAGAIKGGKE.....ATLQSSKNVYTSVVNGQFTF 90
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Listing first 45 summaries
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/cgn2_6/ptodata/1/pubpaa/US06_NEW_PUB.pep:*
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   US-10-193-764-35
US-10-193-764-37
US-10-193-764-28
US-10-193-764-28
US-10-193-764-26
US-10-092-880-9
US-10-092-880-19
US-10-092-880-19
US-10-093-802-14
US-10-193-764-45
US-10-193-764-41
US-10-193-764-41
US-10-193-764-41
US-10-193-764-43
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US-10-193-764-43
US-10-193-764-39
US-10-125-692-14
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35, Appl
37, Appl
28, Appl
28, Appl
9, Appl
9, Appl
10, Appl
11, Appl
14, Appl
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15.3	15.3	<u>ب</u>	5	5	5	5		15.6			•	15.7	•	16.0			16.4		٠			16.7	٠	٠					17.0
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-738-626-	US-10-021-660-73	-09-791-279-	-09-847-208-	-738-626-	-10-156-761-137	0-184-634-	-10-184-	-09-77	9-797-862-15	-10-369-	-09-738-1	-10-028-	-10-193-	-10-193-76	09-741-669	US-10-092-154-516	-09-764-84	-09-797-86	-10-193-76	-10-193-76	-09-971-53	9-765-272	-10-092-880-	-10-193-764-5	-10-193-764-	-10-193-764-5	-10-193-764-5	-10-193-764-4	US-10-193-764-49
equence 54	equence 73,	equence 105	equence 110	e 393	Sequence 13756, A	e 347.	e 34.	9	Sequence 15, Appl	0.0	4.	92	67	e 69	304	e 51	equence 51	e 32	equence 55	e 57	e 68	quence 106	equence 4.	equence 59	equence 61	equence 51	equence 53	equence	

ALIGNMENTS

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US-10-193-764-35

VS-10-193-764-35

Sequence 35, Application US/10193764

Publication No. US20030133943A1

GENERAL INFORMATION:

APPLICANT: LOOSMOTE, Sheena M.

APPLICANT: Yang, Yan-Ping

APPLICANT: Klein, Michel H.

TITLE OF INVENTION: PROTECTIVE RECOMBINANT HAEMOPHILUS INFLUENZAE HIGH

TITLE OF INVENTION: MOLECULAR WEIGHT PROTEINS

FILE REFERENCE: 1038-1239MIS

CURRENT FILING DATE: 2002-07-12

PRIOR APPLICATION NUMBER: US/10/193,764

CURRENT FILING DATE: 2002-07-12

PRIOR FILING DATE: 1998-10-07

NUMBER OF SEQ ID NOS: 91

SOPTWARE: Patentin Ver. 2.1

SEQ ID NO 35

LENGTH: 915

TYPE: PRI

ORGANISM: Haemophilus influenzae

US-10-193-764-35
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Matches 3
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Best Local S
530 EGSTINATTGDANITTQTGNINGK 553
                                                                                    470 TINATTGNANITTKTGEINGEVKSASGNVNITASGNTLNVSNITGONVTVTANSGAITTT
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                                         64 GATDVNAATLQSSKNVYTSVVNGQ 87
                                                                                                                         31 -----FTIDTKTGD------DGNGKVSTT------
                                                                                                                                                                                                                  1 STAGTAEAKAIAGAIKGGKE-----GDTFDYKGVT----
                                                                                                                                                                                                                                                      ch 20.3%; Score 91.5; DB 12;
l Similarity 24.3%; Pred. No. 0.16;
35; Conservative 15; Mismatches 37;
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; ORGANISM: Haemophilus influenzae
US-10-193-764-34
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; ORGANISM: Haemophilus influenzae
US-10-193-764-37
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US-10-193-764-37
                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 34, Application US/101:
Publication No. USZ0030133943A1
GENERAL INFORMATION:
APPLICANT: Loosmore, Sheena M.
APPLICANT: Yang, Yan-Ping
APPLICANT: Klein, Michel H.
                                                                                Matches
                                                                                                                 Query Match
                                                                                                                                                                                                                                SEQ ID NO 34
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APPLICANT: Loosmore, Sheena M.
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                                                                                                                                                                                                                                                  SOFTWARE: PatentIn Ver. 2.1
                                                                                                                                                                                                                                                                 PRIOR FILING DATE: 1998-10-07
NUMBER OF SEQ ID NOS: 91
                                                                                                                                                                                                                                                                                                           APPLICANT: KIEIN, MICHEI H.
TITLE OF INVENTION: PROTECTIVE RECOMBINANT HAEMOPHILUS INFLUENZAE HIGH
TITLE OF INVENTION: MOLECULAR WEIGHT PROTEINS
FILE REFERENCE: 1038-1239MIS
CURRENT APPLICATION NUMBER: US/10/193,764
CURRENT FILING DATE: 2002-07-12
                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: 09/167,568 PRIOR FILING DATE: 1998-10-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT FILING DATE: 2002-07-12
PRIOR APPLICATION NUMBER: 09/167,568
PRIOR FILING DATE: 1998-10-07
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CURRENT APPLICATION NUMBER: US/10/193,764
CURRENT FILING DATE: 2002-07-12
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TITLE OF INVENTION: PROTECTIVE RECOMBINANT HAEMOPHILUS INFLUENZAE HIGH
TITLE OF INVENTION: MOLECULAR WEIGHT PROTEINS
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                                                                                                                                                                                                           ENGTH: 1228
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                                                                                             Similarity
ATTGSVEVTAKTGDIKGGIESNSGNVNITASGDTLNVSNITGQNVTVAAASGAVTTTKGS 782
                                         STAGTAEAKAIAGAIKGGKE---
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10. US20030133943A1
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                                                                            Conservative
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                                                                                           20.3%; Score 91.5; DB 12; 24.3%; Pred. No. 0.24;
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                                                                          Mismatches
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                                     GDTFDYKGVT
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; TYPE: PRT
; ORGANISM: Haemophilus influenzae
US-10-193-764-26
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                                                                                 SOFTWARE: PatentIn Ver. 2.1 SEQ ID NO 26
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Publication No. US20030133943A1
GENERAL INFORMATION:
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Best Local
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Publication No. US20030133943A1
                                                                                                                                                                                                                                   APPLICANT: LOOSMOTE, Sheena M.
APPLICANT: Yang, Yan-Ping
APPLICANT: Klein, Michel H.
TITLE OF INVENTION: PROTECTIVE RECOMBINANT HAEMOPHILUS INFLUENZAE HIGH
TITLE OF INVENTION: MOLECULAR WEIGHT PROTEINS
FILE REFERENCE: 1038-1239MIS
                                                                                                                                                 CURRENT APPLICATION NUMBER: US/10/193,764
CURRENT FILING DATE: 2002-07-12
PRIOR APPLICATION NUMBER: 09/167,568
PRIOR FILING DATE: 1998-10-07
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APPLICANT: Yang, Yan-Ping
APPLICANT: Yang, Yan-Ping
APPLICANT: Yang, Yan-Ping
APPLICANT: Klein, Michel H.
TITLE OF INVENTION: PROTECTIVE RECOMBINANT HAEMOPHILUS INFLUENZAE HIGH
TITLE OF INVENTION: MOLECULAR WEIGHT PROTEINS
FILE REFERENCE: 1038-1239MIS
CURRENT APPLICATION NUMBER: US/10/193,764
CURRENT FILING DATE: 2002-07-12
PRIOR APPLICATION NUMBER: 09/167,568
ERIOR APPLICATION NUMBER: 09/167,568
ERIOR APPLICATION NUMBER: 09/167,568
ERIOR FILING DATE: 1998-10-07
NUMBER OF SEQ ID NOS: 91
                                                                                                                               NUMBER OF SEQ ID NOS: 91
                                                             LENGTH: 1226
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Query Match

20.1%; Score

90.5;

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12;

Length 1226;

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RESULT 7
US-10-092-880-10
Sequence 10, Application US/10092880
Publication No. US20020164354A1
GENERAL INFORMATION:
APPLICANT: Barenkamp, Stephen J.
TITLE OF INVENTION: HIGH MOLECULAR WEIGHT SURFACE PROTEINS OF NON-TYPEABLE
TITLE OF INVENTION: HAEMOPHILUS
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; ORGANISM: Haemophilus influenzae
US-10-092-880-9
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                          FILE REFERENCE:
CURRENT APPLICATION NUMBER: US/10/092,
CURRENT FILING DATE: 2002-03-08
PRIOR APPLICATION NUMBER: 09/155,614
PRIOR FILING DATE: 1998-09-30
PRIOR FILING DATE: 1998-09-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 9, Application US/10092880 Publication No. US20020164354A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CURRENT FILING DATE: 2002-03-08
PRIOR APPLICATION NUMBER: 09/155,614
PRIOR FILING DATE: 1998-09-30
PRIOR APPLICATION NUMBER: 08/617,697
PRIOR FILING DATE: 1996-04-01
PRIOR APPLICATION NUMBER: PCT/US97/04707
PRIOR APPLICATION NUMBER: PCT/US97/04707
PRIOR FILING DATE: 1997-04-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity 24.3%; p: Matches 35; Conservative 15;
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 PRIOR
                PRIOR APPLICATION NUMBER: 08/617,697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Barenkamp, Stephen J.
TITLE OF INVENTION: HIGH MOLECULAR WEIGHT SURFACE PROTEINS OF NON-TYPEABLE
TITLE OF INVENTION: HABMODHILUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT APPLICATION NUMBER: US/10/092,880 CURRENT FILING DATE: 2002-03-08
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LENGTH:
FILING DATE: 1996-04-01
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Pred. No. 1.2;
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5; Mismatches
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RESULT 9
US-10-245-802-14
; Sequence 14, Application US/10245802
; Publication No. US20030124134A1
; GENERAL INFORMATION:
; GENERAL INFORMATION:
; APPLICANT: Edwards, John E.
; TITLE OF INVENTION: PHARMACEUTICAL COMPOSITIONS AND METHODS TO VACCINATE AGAINST
; TITLE OF INVENTION: DISSEMINATED CANDIDIASIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; TYPE: PRT
; ORGANISM: Haemophilus influenzae
US-09-797-862-33
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SEQ ID NO 33
LENGTH: 2353
                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 19.0%;
Best Local Similarity 39.1%;
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Patent No. US20020102276A1
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Best Local (
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APPLICANT: MOXON, E. RICHARD
TITLE OF INVENTION: NOVEL SURFACE ANTIGEN
FILE REFERENCE: 065064/0134
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CURRENT FILING DATE: 2001-05-03
PRIOR APPLICATION NUMBER: PCT/AU98/01031
PRIOR FILING DATE: 1998-12-14
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PRIOR FILING DATE: 1997-04-01
NUMBER OF SEQ ID NOS: 11
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    REFERENCE:
                                                                                                                                                                                                                                  1491 SGAT 1494
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JENNINGS, MICHAEL PAUL
MOXON, E. RICHARD
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Pred. No. 2.6;
6; Mismatches 28;
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RESULT 11
US-10-193-764-43
is Sequence 43, Application US/10193764
publication No. US20030133943A1
publication NoRMATION:
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; ORGANISM: Haemophilus influenzae
US-10-193-764-45
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Publication No. US20030133943A1
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SOFTWARE: PatentIn version 3.2
SEQ ID NO 14
APPLICANT: LOOSMOTE, Sheena M.
APPLICANT: Yang, Yan-Ping
APPLICANT: Yang, Yan-Ping
APPLICANT: Klein, Michel H.
TITLE OF INVENTION: PROTECTIVE RECOMBINANT HAEMOPHILUS INFLUENZAE HIGH
TITLE OF INVENTION: MOLECULAR WEIGHT PROTEINS
FILE REFERENCE: 1038-1239MIS
CURRENT APPLICATION NUMBER: US/10/193,764
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Best Local
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CURRENT APPLICATION NUMBER: US/10/193,764
CURRENT FILING DATE: 2002-07-12
PRIOR APPLICATION NUMBER: 09/167,568
PRIOR PRIOR OF SEQ ID NOS: 91
NUMBER OF SEQ ID NOS: 91
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TYPE: PRT
ORGANISM: Candida albicans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ENGTH: 1073
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                                                                                                                                                                                                                                                                                                                                                                                714 ATTGNVKLTAVTSDÍQGGIKSNSGD---
                                                                                                                                                                                                                                                                                              768 LTVGNVSGNTVTVTANRGALTTLAGSTINGTNGVTTSSQSGE 809
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Klein, Michel H.
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RESULT 13
US-10-193-764-39
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US-10-193-764-41
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Sequence 39, Application US/10193764
Publication No. US20030133943A1
GEMERAL INFORMATION:
APPLICANT: Loosmore, Sheena M.
APPLICANT: Yang, Yan-Ping
APPLICANT: Yang, Yan-Ping
APPLICANT: Kiein, Michel H.
TITLE OF INVENTION: PROTECTIVE RECOMBINANT HAEMOPHILUS INFLUENZAE HIGH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE: PatentIn Ver. 2.1 SEQ ID NO 41
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: LOOSMOTE, Sheena M.
APPLICANT: Yang, Yan-Ping
APPLICANT: Yang, Yan-Ping
APPLICANT: Yang, Michel H.
TITLE OF INVENTION: PROTECTIVE RECOMBINANT HAEMOPHILUS INFLUENZAE HIGH
TITLE OF INVENTION: MOLECULAR WEIGHT PROTEINS
FILE REFERENCE: 1038-1239MIS
CURRENT APPLICATION NUMBER: US/10/193,764
CURRENT FILING DATE: 2002-07-12
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Matches 27; Conservative
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PRIOR FILING DATE: 1998-10-07
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PRIOR FILING DATE: 1998-10-07
NUMBER OF SEQ ID NOS: 91
SOFTWARE: PatentIn Ver. 2.1
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TYPE: PRT
ORGANISM: Haemophilus influenzae
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                                                                                                                                                                                                                                                                                                                   ----TGDDGNGKVSTTINGEKVTLTVA---
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26.5%;
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Pred. No. 4.6;
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Pred. No. 2;
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RESULT 15
US-10-125-692-14
/ Sequence 14, Application US/10125692
/ Publication No. US20030044429A1
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; ORGANISM: C. jejuni
US-10-125-692-11
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CURRENT FILING DATE: 2002-04-17
PRIOR APPLICATION NUMBER: US 60/285,477
PRIOR FILING DATE: 2001-04-20
NUMBER OF SEQ ID NOS: 43
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 11
LENGTH: 572
                                                                                                                                                                                                                                                                      Query Match 17.4%;
Best Local Similarity 35.1%;
Matches 26; Conservative
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APPLICANT:
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Best Local &
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Ozinsky, Adrian
TITLE OF INVENTION: TOll-Like Receptor 5 Ligands and Methods
TITLE OF INVENTION: of Use
FILE REFERENCE: P-IS 5155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Aderem, Alan APPLICANT: Hayashi, Fun
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE OF INVENTION: MOLECULAR WEIGHT PROTEINS FILE REFERENCE; 1038-1239MIS CURRENT APPLICATION NUMBER: US/10/193,764 CURRENT FILING DATE: 2002-07-12 PRIOR APPLICATION NUMBER: 09/167,568 PRIOR FILING DATE: 1998-10-07 NUMBER OF SEQ ID NOS: 91
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17.5%; Score 79; DB:
Similarity 23.0%; Pred. No. 4.6;
29; Conservative 15; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hayashi, Fumitaka
Smith, Kelly D.
Underhill, David M.
                                                                                                                                                                                                                                                                  Score 78.5; DE Pred. No. 2.5; B; Mismatches
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SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 14
                                                                                                                                                                   Query Match 17.2%; Score 77.5; Best Local Similarity 32.5%; Pred. No. 2;
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APPLICANT: Aderem, Alan
                                                                                                                                                     Matches
                                                                                                                                                                                                                                          LENGTH: 394
TYPE: PRT
ORGANISM: P.
                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Hayashi, Fumitaka
APPLICANT: Smith, Kelly D.
APPLICANT: Underhill, David M.
APPLICANT: Ozinsky, Adrian
TITLE OF INVENTION: Toll-Like Receptor 5 Ligands and Methods
FILE REFERENCE: P-IS 5155
                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION NUMBER: US/10/125,692
CURRENT FILING DATE: 2002-04-17
PRIOR APPLICATION NUMBER: US 60/285,477
PRIOR FILING DATE: 2001-04-20
263 -VVIAD--TGSTGVGTA 276
                                                                       214 TAEQAAAK-TAAAVNDANVGIGAFSDGDTISYV----SKAGKDGSGAITSAVSG---
                                   55 TLTVADIATGATDVNAA 71
                                                                                                       2 TAGTABAKATAGAIKGG-----KEGDTFDYKGVTFTIDTKTGDDGNGKVSTTINGEKV
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Search completed: January 12, 2004, 11:25:14 Job time : 44 secs

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Database :
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Maximum Match 100%
Listing first 45 summaries
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Perfect score:
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SIDS1/gcgdata/geneseq/geneseqp-emb1/AA198.DAT:

SIDS1/gcgdata/geneseq/geneseqp-emb1/AA198.DAT:

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/SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1987.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1987.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STAGTAEAKATAGAIKGGKE.....ATLQSSKNVYTSVVNGQFTF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GenCore version 5.1.6 Copyright (c) 1993 - 2004 Compugen Ltd
than or equal to the score
by analysis of the total
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score distribution.
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90	91.5	91.5	133	197	349	427	446	451	Score	
20.0	20.3	20.3	29.5	43.7	77.4	94.7	98.9	100.0	Match	
1221	1228	1222	27	40	69	90	493	90	Match Length DB	
21	21	21	22	22	22	22	22	22	BB	
AAB01825	AAB01828	AAB01830	AAB31436	AAB31435	AAB31434	AAB31433	AAB31432	AAB66796	ID	
Haemophilus influe	Haemophilus influe	H. influenzae stra	Antigenic peptide	Antigenic peptide	Antigenic peptide	Antigenic peptide	Amino acid sequenc	Part of Salmonella	Description	

Detecting the presence of an infectious agent in animals, comprises immobilizing viral or bacterial specific antigens on a piezoelectric crystal and measuring the change in resonance frequency of the crysta

the crystal

ALIGNMENTS

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RESULT 1
AAB66796
WPI; 2001-138176/14.
                                          Li SFY,
                                                                              05-JUL-1999;
                                                                                             04-OCT-1999;
                                                                                                                           WO200102858-A1
                                                                                                                                         Salmonella enteritidis.
                                                                                                                                                                    Part of Salmonella enteritidis flagellin protein.
                                                                                                                                                                                      12-APR-2001
                                                                                                                                                                                                     AAB66796;
                                                                                                                                                                                                                   AAB66796 standard; Protein; 90 AA
                                                       (MOLE-) INST MOLECULAR AGROBIOLOGY (MATE-) INST MATERIALS RES & ENG.
                                                                                                             11-JAN-2001.
                                                                                                                                                       Immunodiagnostic; piezoelectric crystal; frequency infection
                                         Su X,
                                                                                                                                                                                     (first entry)
                                        Kwang
                                                                               998G-0003147.
                                                                                             99WO-SG00098.
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                                          Low S,
                                          Liu
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Best Local S
Matches 90
The present sequence represents the flagellin protein of Salmonella enteritidis. The specification describes a method for detecting S. enteritidis in a biological sample obtained from poultry. The method comprises contacting the sample with an antigenic fragment of S. enteritidis fimbrial or flagellin protein and detecting the formation of a complex, where the fragment is specifically recognized by S. enteritidis antibodies. The antigenic fragments are specific to Salmonella enteritidis and enable specific detection of S. enteritidis even in the presence of other Salmonella spp. The methods are useful for the specific detection of S. enteritidis infections in biological
                                                                                                                                                                                          New method for the specific detection of Salmonella enteritidis infections of poultry comprises contacting a biological sample vanishmic fragments of S. enteritidis fimbrial and/or flagellin
                                                                                                                                                                                   proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The present invention relates to an immunodiagnostic test for infectious agents in an organism, involving immobilizing an antigen from the agent or an antibody specific for the antigen on a piezoelectric (Pz) crystal, measuring a resonant frequency of the crystal, contacting the crystal with a biological sample, measuring a resonant frequency of the crystal, and comparing the
                                                                                                                                                        Disclosure;
                                                                                                                                                                                                                                                      WPI;
                                                                                                                                                                                                                                                                                Kwang H,
                                                                                                                                                                                                                                                                                                                                     22-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                22-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                               Salmonella enteritidis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Amino acid sequence of the flagellin protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAB31432;
                                                                                                                                                                                                                                                                                                         (MOLE-) INST MOLECULAR AGROBIOLOGY
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                      fragment; fimbrial Sef
ellin protein; poultry.
                                                                                                                                                                                                                                                     2001-071400/08
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  standard; Protein;
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                                                                                                                                                                                                                                                                               Liu W,
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                                                                                                                                                      Page 43;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      antigen; fimbrial
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 Query Match
Best Local S
Matches 85
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Best Local
                                                                       AAB31433-37 represent antigenic peptides derived from the flagellin protein of Salmonella enteritidis. The specification describes a method for detecting S. enteritidis in a biological sample obtained from poultry. The method comprises contacting the sample with an antigenic fragment of S. enteritidis fimbrial or flagellin protein and detecting the formation of a complex, where the fragment is specifically recognized by S. enteritidis antibodies. The antigenic fragments are specific to Salmonella enteritidis and enable specific detection of S. enteritidis even in the presence of other Salmonella spp. The methods are useful for the specific detection of S. enteritidis amples derived from poultry.
                                                  Sequence
                                                                                                                                                                                                                                                                        New method for the specific detection of Salmonella enteritidis infections of poultry comprises contacting a biological sample antigenic fragments of S. enteritidis fimbrial and/or flagellin
                                                                                                                                                                                                                                   Disclosure; Page 43; 49pp; English
                                                                                                                                                                                                                                                                                                                              WPI; 2001-071400/08
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Salmonella enteritidis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C128 fragment; fimt flagellin protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO200078995-A1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAB31433
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                                                     90
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            94.7%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sef14 antigen; fimbrial protein;
                                                                                                                                                                                                                                                                                                                                                        Loh KYH;
Score 427; DB 22;
Pred. No. 3.1e-36;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            90
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Pred. No. 2.9e-37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           the flagellin protein
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AAB31435
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Best Local :
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                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
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samples derived from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 19; Page 43; 49pp; English.
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                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                    VYTSVVNGQ 87
                                                                                                                                                                                                                                                              KEGDTFDYKGVTFTIDTKTGDDGNGKVSTTINGEKVTLTVADIATGATDVNAATLQSSKN
                                                                                                                                                                                                                                    KEGDTFDYKGVTFTIDTKTGDDGNGKVSTTINGEKVTLTVADIATGATDVNAATLQSSKN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Liu W,
                                                                                                                                                                                                                                                                                                                                                                                                                                                69 AA;
                                                                                                                                                                                                                                                                                                                                           Conservative
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                                                                                                                                                                                                                                                                                                                                   Score 349; DB 22;
Pred. No. 2.1e-28;
0; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                     Length 69;
                                                                                                                                                                                                                                                                                                                                      Indels
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                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                      60
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AAB31436
ID AAB3
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AC AAB3
XX 20-J
XX AAB3
XX 20-J
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                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 6
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Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein of Salmonella enteritidis. The specification describes a method for detecting S. enteritidis in a biological sample obtained from poultry. The method comprises contacting the sample with an antigenic fragment of S. enteritidis fimbrial or flagellin protein and detecting the formation of a complex, where the fragment is specifically recognized by S. enteritidis antibodies. The antigenic fragments are specific to Salmonella enteritidis and enable specific detection of S. enteritidis even in the presence of other Salmonella spp. The methods are useful for the specific detection of S. enteritidis samples derived from poultry.
                                                                                                                    C128 fragment; flagellin prote
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New method for the specific detection of Salmonella enteritidis infections of poultry comprises contacting a biological sample vantigenic fragments of S. enteritidis fimbrial and/or flagellin
                                                                          Salmonella enteritidis.
                                                                                                                                                                                                    Antigenic peptide
                                                                                                                                                                                                                                                      20-APR-2001
                                                                                                                                                                                                                                                                                                         AAB31436;
                                                                                                                                                                                                                                                                                                                                                        AAB31436 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAB31433-37 represent antigenic peptides derived from the flagellin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 20; Page 43; 49pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2001-071400/08
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (MOLE-) INST MOLECULAR AGROBIOLOGY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   22-JUN-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Antigenic peptide derived from the flagellin protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20-APR-2001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                22-JUN-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  36 KTGDDGNGKVSTTINGEKVTLTVADIATGATDVNAATLQS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KTGDDGNGKVSTTINGEKVTLTVADIATGATDVNAATLQS
                                                                                                                          protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Liu W,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       40 AA;
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                                                                                                                                                                                                                                                    (first entry)
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                                                                                                                                               fimbrial Sef14 antigen; fimbrial protein,
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                                                                                                                                                                                                    derived from
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                                                                                                                                                                                                                                                                                                                                                      peptide; 27
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100.0%;
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Pred. No.
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                                                                                                                                                                                                    the flagellin protein
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with

Length

Indels

0

Gaps

0

40

밁 Ş В 8

AAB31435 standard; peptide; 40

WO200078995-A1

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RESULT 7
AAB01830
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Best Local S
Matches 27
              07-OCT-1998;
08-DEC-1998;
                                                                                                                                                                                                                Mature HMW protein; hmw gene; hmwA1; hmwA2; high molecular weight; non-typeable Haemophilus influenzae; NTH; non-encapsulated; recombinant production; Escherichia coli; antibacterial; vaccine; human disease; otitis media; epiglottitis; pneumonia; tracheobronc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAB31433-37 represent antigenic peptides derived from the flagellin protein of Salmonella enteritidis. The specification describes a method for detecting S. enteritidis in a biological sample obtained from poultry. The method comprises contacting the sample with an antigenic fragment of S. enteritidis fimbrial or flagellin protein and detecting the formation of a complex, where the fragment is specifically recognized by S. enteritidis antibodies. The antigenic fragments are specific to Salmonella enteritidis and enable specific detection of S. enteritidis even in the presence of other Salmonella spp. The methods are useful for the specific detection of S. enteritidis infections in biological
                                                  07-OCT-1999;
                                                                           13-APR-2000
                                                                                                                                                                             Haemophilus influenzae strain
                                                                                                                                                                                                                                                                            H. influenzae strain Kl mature full-length HMWIA protein, SEQ ID NO:37
                                                                                                                                                                                                                                                                                                          11-SEP-2000
                                                                                                                                                                                                                                                                                                                                  AAB01830;
                                                                                                                                                                                                                                                                                                                                                          AAB01830 standard;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New method for the specific detection of Salmonella enteritidis infections of poultry comprises contacting a biological sample with antigenic fragments of S. enteritidis fimbrial and/or flagellin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI;
                                                                                                                                         Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    samples derived from poultry.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  proteins
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                                                                                                                                                                                                                                                                                                                                                                                                                                        40 DGNGKVSTTINGEKVTLTVADIATGAT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Liu W,
                                                                                                                                                                                                                                                                                                                                                                                                                         DGNGKVSTTINGEKVTLTVADIATGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Page
                                                                                                                                                                                                       diagnosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MOLECULAR AGROBIOLOGY.
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              98US-0167568
98US-0206942
                                                  99WO-CA00938
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                                                                                                                                         307
                                                                                                                                                   Location/Qualifiers
                                                                                                                             /note=
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      49pp;
                                                                                                                                                                                                                                                                                                                                                          Protein;
                                                                                                                                                                                                                                                                                                        entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     29.5%;
                                                                                                                           "Encoded by GG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      English
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                                                                                                                                                                                                                                                                                                                                                        1222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 133;
Pred. No.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                         27
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7.7e-07;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 27;
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                                                                                                                                                                                                                   tracheobronchitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
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RESULT 8 AAB01828

AAB01828 standard; Protein;

Haemophilus 11-SEP-2000

(first entry)

influenzae strain K1 full-length HMW1A protein,

SEQ IJ

NO:34

HMW protein; hmw gene; hmwA1; nmwA2; nmyn mon-typeable Haemophilus influenzae; NTH1; non-encapsulated; necombinant production; Escherichia coli; antibacterial; vaccine; numan disease; otitis media; epiglottitis; pneumonia; tracheobron

tracheobronchitis;

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INGEKVILIV--

ADIAT

836 63 776 30 G

777 64

TINATTGNANITTKTGEINGEVKSASGNVNITASGNTLNVSNITGQNVTVTANSGAITTT

87

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837

EGSTINATTGDANITTOTGNINGK 860 GATDVNAATLQSSKNVYTSVVNGQ

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                                                                                                                                                                                 Query Match
Best Local (
                                                                                       Matches
                                                                                                                                                                                                                                                               the invention contains an A gene modified such that it encodes only the mature HMWA. The invention also discloses hmwA genes (AAA52175-A52198) and HMWA proteins (AAB01824-B01849) from the non-typeable H. influenzae strains Joyc, KI, KZI, LCDCZ, PMHI, 15 and 12. The nucleic acids and vectors are used for the production of recombinant H. influenzae HMW proteins which can be used as vaccines to mediate a humoral or cell-mediated immune response to provide protection against diseases in humans caused by H. influenzae (e.g., otitis media, epiglottitis, pneumonia and tracheobronchitis). The HMW proteins are also useful as antigens in immunoassays for detecting antibodies against Haemophilus, HMW proteins and/or HMW peptides. The nucleotide sequences encoding the HMW proteins can be used to isolate and clone hmw genes from other non-typeable strains of Haemophilus via hybridisation reactions. The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           and the hmwB and hmwC genes encode accessory proteins which are responsible for post-translational processing and secretion of the HMWA proteins. The modified hmwABC operon used in the expression construct of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The invention relates to the recombinant production of Haemophilus influenzae high molecular weight (HMW) proteins in Escherichia coli. The expression construct used to effect recombinant expression comprises a promoter functional in E. coli (e.g., the T7 promoter) operably linked to a modified hmwABC operon from a non-typeable (non-encapsulated) H. influenzae (NUTH). Most HMW-expressing NTH1 strains contain two haw gen clusters termed hmwABC and hmw2ABC. Each hmwABC operon comprises hmwA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nucleic acid molecule for producing recombinant high molecular weight proteins of Haemophilus which are used as a vaccine to provide protection against Haemophilus induced diseases in humans -
                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             influenzae (NTHi). Most HMW-expressing NTHi strains contain two hmw genuclusters termed hmwlABC and hmw2ABC. Each hmwABC operon comprises hmwA, hmwB and hmwC genes. The hmwA genes encode the structural HMWA proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 8;
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  717
                                          \vdash
                                                                                       35;
                                                                                                                 Similarity
                                                                                                                                                                                                                              sequence represents a mature HMWA protein of H. influenzae.
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ATTGSVEVTAKTGDIKGGIESNSGNVNITASGDTLNVSNITGONVTVAAASGAVTTTKGS
                                            STAGTAEAKAIAGAIKGGKE------GDTFDYKGVT--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Fig 20A-R; 307pp; English
                                                                                                                                                                                 1222 AA;
                                                                                       Conservative
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                                                                                                            20.3%;
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                                                                                       15;
                                                                                                          Score 91.5; DI
Pred. No. 1.4;
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                                                                                     Mismatches
                                                                                                                                    DB
                                                                                                                                    21;
                                                                                       37;
                                                                                                                                  Length 1222
                                                                                                                                                                                                                                                   from a non-typeable
                                                                                       Indels
                                                                                       57;
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mw gene

Haemophilus influenzae strain Kl

detection; diagnosis

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843 EGSTINATTGDANITTQTGNINGK 866

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Best Local S
Matches 35
                                                                                                                                                                                                                                                                                                 and HMWA proteins (AAB01824-B01849) from the non-typeable H. influenzae strains Joyc, KI, KZ1, LCDC2, PMH1, 15 and 12. The nucleic acids and vectors are used for the production of recombinant H. influenzae HMW proteins which can be used as vaccines to mediate a humoral or cell-mediated immune response to provide protection against diseases in humans caused by H. influenzae (e.g., otitis media, epiglottitis, pneumonia and tracheobronchitis). The HMW proteins are also useful as antigens in immunoassays for detecting antibodies against Haemophilus, HMW proteins can be used to isolate and clone haw genes from other non-typeable strains of Haemophilus via hybridisation reactions. The present sequence represents an HMWA protein from a non-typeable strain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The invention relates to the recombinant production of Haemophilus influenzae high molecular weight (HMW) proteins in Escherichia coli. The expression construct used to effect recombinant expression comprises a promoter functional in E. coli (e.g., the T7 promoter) operably linked to a modified hmwABC operon from a non-typeable (non-encapsulated) H. influenzae (NTHi). Most HMW-expressing NTHi strains contain two hmw gene clusters termed hmwABC and hmwABC. Bach hmwABC operon comprises hmwA, hmwB and hmwC genes. The hmwA genes encode the structural HMWA proteins and the hmwB and hmwC genes encode the structural HMWA proteins responsible for post-translational processing and secretion of the HMWA proteins. The modified hmwABC operon used in the expression construct of the invention contains an A gene modified such that it encodes only the matura HMWA. The invention also discloses hmwA genes (AAAS2175-A52198) and HMWAA proteins (AAAS2175-A52198)
                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nucleic acid molecule for producing recombinant high molecular weight proteins of Haemophilus which are used as a vaccine to provide protection against Haemophilus induced diseases in humans -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              N-PSDB;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          07-OCT-1998;
08-DEC-1998;
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DB; AAA52179.
                                    783
                                                                                                            723
                                                                       31
64 GATDVNAATLQSSKNVYTSVVNGQ 87
                                                                                                                                           1 STAGTAEAKAIAGAIKGGKE------GDTFDYKGVT--
                                                                                                                                                                                   35;
                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SM,
                                TINATTGNANITTKTGEINGEVKSASGNVNITASGNTLNVSNITGQNVTVTANSGAITTT
                                                                                                    ATTGSVEVTAKTGDIKGGIESNSGNVNITASGDTLNVSNITGQNVTVAAASGAVTTTKGS
                                                                                                                                                                                                                                                         1228 AA;
                                                                   -----FTIDTKTGD-----DGNGKVSTT------
                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            98US-0167568.
98US-0206942.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers 313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note= "Encoded by GG"
                                                                                                                                                                               20.3%; Score 91.5; D
24.3%; Pred. No. 1.4;
tive 15; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Klein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Œ
                                                                                                                                                                                                                    DB 21;
                                                                                                                                                                               37;
                                                                                                                                                                                                                  Length 1228;
                                                                                                                                                                               Indels
                                                                 INGEKYTLTV---ADIAT
                                                                                                                                                                               57;
                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                             strain of
                                842
                                                                 63
                                                                                                      782
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RESULT 9
AAB01825
ID AAB0
                                                                                                                                                                                                                                                                                                                                                                   Mature HMW protein; hmw gene; hmwAl; hmwA2; high molecular weight non-typeable Haemophilus influenzae; NTHi; non-encapsulated; recombinant production; Escherichia coli; antibacterial; vaccine; human disease; otitis media; epiglottitis; pneumonia; tracheobron
                                                                                                                                                                                                                                                                                                                        13-APR-2000.
                                                                                                                                                                                                                                                                                                                                     WO200020609-A2
                                                                                                                                                                                                                                                                                                                                                 Haemophilus influenzae strain Joyc
                                                                                                                                                                                                                                                                                                                                                              detection; diagnosis.
                                                                                                                                                                                                                                                                                                                                                                                                     Haemophilus influenzae strain Joyc mature HMW1A protein, SEQ ID NO:28
                                                                                                                                                                                                                                                                                                                                                                                                                     11-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                               AAB01825 standard; Protein; 1221 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                        hmwA2; high molecular weight;
                                                                                                                                                                                                                                                                                                                                                                     tracheobronchitis;
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Nucleic acid molecule for producing recombinant high molecular weight proteins of Haemophilus which are used as a vaccine to provide protection against Haemophilus induced diseases in humans -

07-0CT-1998; 08-DEC-1998; 07-OCT-1999;

98US-0167568. 98US-0206942. 99WO-CA00938

Loosmore SM,

Yang Y,

Klein MH;

AAA52176

(CONN-) CONNAUGHT LAB LTD.

Claim 8; Fig 18A-R; 307pp; English.

CC expression construct used to effect recombinant expression comprises a
CC promoter functional in E. coli (e.g., the T7 promoter) operably linked
CC to a modified hmwABC operon from a non-typeable (non-encapsulated) H.
CC influenzae (NTHi). Most HMW-expressing NTHi strains contain two hmw gene
CC clusters termed hmwlABC and hmw2ABC. Each hmwABC operon comprises hmwA,
CC hmwB and hmwC genes encode accessory proteins which are
CC and the hmwB and hmwC genes encode accessory proteins which are
CC responsible for post-translational processing and secretion of the HMWA
CC proteins. The modified hmwABC operon used in the expression construct of
CC the invention contains an A gene modified such that it encodes only the
CC mature HMWA. The invention also discloses hmwA genes (AAA52175-A55198)
CC and HMWA proteins (AAB01824-B01849) from the non-typeable H. influenzae
CC strains JOyc, KI, KZ1, LCDC2, PMH1, 15 and 12. The nucleic acids and
CC vectors are used for the production of recombinant H. influenzae HMW
CC proteins which can be used as vaccines to mediate a humoral or
CC cell-mediated immune response to provide protection against diseases in
CC pneumonia and tracheobronchitis). The HMW proteins are also useful as
CC antigens in immunoassays for detecting antibodies against Haemophilus,
CC the modified strains of Haemophilus via hybridiastion reactions. The
CC non-typeable strains of Haemophilus via mybridiastion reactions. The present sequence represents a mature HMWA strain of H. influenzae. influenzae The invention relates to the recombinant production of Haemophilus high molecular weight (HMW) proteins in Escherichia coli. The protein from a non-typeable

Sequence 1221 AA;

Query Match

20.0%; Score 90; DB 21; Length 1221;

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RESULT 10
AAB01824
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Matches
                 to a modified hmwABC operon from a non-typeable (non-engagulated) H. influenzae (NTHi). Most HMW-expressing NTHi strains contain two hmw gene clusters termed hmwIABC and hmw2ABC. Each hmwABC operon comprises hmwA, hmwB and hmwC genes. The hmwAB encode the structural HMWA proteins and the hmwB and hmwC genes encode accessory proteins which are responsible for post-translational processing and secretion of the HMWA proteins. The modified hmwABC operon used in the expression construct of the invention contains an A gene modified such that it encodes only the mature HMWA. The invention also discloses hmwA genes (AAAS2175-A52198) and HMWA proteins (AAB01824-B01849) from the non-typeable H. influenzae strains Joyc, K1, K21, LCDC2, PMH1, 15 and 12. The nucleic acids and vectors are used for the production of recombinant H. influenzae HMW
                                                                                                                                                                                                                                                                                                                         The invention received weight (HMW) proteins in Escheticular viril influenzae high molecular weight (HMW) proteins in Escheticular veight (e.g., the T7 promoter) operably linked promoter functional in E. coli (e.g., the T7 promoter) operably linked promoter functional in E. coli (e.g., the T7 promoter) operably linked promoter functional in E. coli (e.g., the T7 promoter) operably linked promoter functional in E. coli (e.g., the T7 promoter) operably linked promoter functional in E. coli (e.g., the T7 promoter) operably linked promoter functional in E. coli (e.g., the T7 promoter) operably linked promoter functional in E. coli (e.g., the T7 promoter) operably linked promoter functional in E. coli (e.g., the T7 promoter) operably linked promoter functional in E. coli (e.g., the T7 promoter) operably linked promoter functional in E. coli (e.g., the T7 promoter) operably linked promoter functional in E. coli (e.g., the T7 promoter) operably linked promoter functional in E. coli (e.g., the T7 promoter) operably linked promoter functional in E. coli (e.g., the T7 promoter) operably linked promoter functional in E. coli (e.g., the T7 promoter) operably linked promoter functional in E. coli (e.g., the T7 promoter) operably linked promoter functional in E. coli (e.g., the T7 promoter) operably linked promoter functional in E. coli (e.g., the T7 promoter) operably linked promoter functional in E. coli (e.g., the T7 promoter) operably linked promoter functional in E. coli (e.g., the T7 promoter) operably linked promoter functional in E. coli (e.g., the T7 promoter) operably linked promoter functional in E. coli (e.g., the T7 promoter) operably linked promoter functional in E. coli (e.g., the T7 promoter) operably linked promoter functional in E. coli (e.g., the T7 promoter) operably linked promoter functional in E. coli (e.g., the T7 promoter) operably linked promoter functional in E. coli (e.g., the T7 promoter) operably linked promoter functional in E. coli (e.g., the T7 promoter) operably linked promoter functional in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     proteins of Haemophilus which are used as a vaccine to protection against Haemophilus induced diseases in humans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Nucleic acid molecule for producing recombinant high molecular weight proteins of Haemophilus which are used as a vaccine to provide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      07-OCT-1998;
08-DEC-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         detection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HMW protein; hmw gene; hmwA1; hmwA2; high molecular weight; non-typeable Haemophilus influenzae; NTHi; non-encapsulated; recombinant production; Escherichia coli; antibacterial; vaccine; human disease; otitis media; epiglottitis; pneumonia; tracheobron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Haemophilus influenzae strain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 11-SEP-2000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              The invention relates to the recombinant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Loosmore
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (CONN-) CONNAUGHT LAB LTD
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2000-303789/26.
DB; AAA52175.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       775
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           715 ATIGSVEVTAKTGDIKGGIESNSGNVNITASGDTLNVSNITGQNVTVAAASGAVTTTKGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               31
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35; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TINATTGNANITTKTGEINGEVKSASGNVNITASGNTLNNVSNITGQNVTVTANSGAITT 834
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Fig 18A-R; 307pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      diagnosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first
     can be used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      98US-0167568.
98US-0206942.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Klein MH
        ag
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5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           epiglottitis; pneumonia;
vaccines to mediate a humoral or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Joyc HMW1A protein,
                                                                                                                                                                                                                                                                                                                                                                                                                          Ombinant production of Haemophilus (HMW) proteins in Escherichia coli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                to provide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INGEKVILIV---ADIA 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              tracheobronchitis;
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RESULT 11
AAR41731
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cell-mediated immune response to provide protection against diseases in humans caused by H. influenzae (e.g., ottits media, epiglottiis, pneumonia and tracheobronchitts). The HMW proteins are also useful as antigens in immunoassays for detecting antibodies against Haemophilus, HMW proteins and/or HMW peptides. The nucleotide sequences encoding the HMW proteins can be used to isolate and clone hmw genes from other non-typeable strains of Haemophilus via hybridisation reactions. The present sequence represents an HMWA protein from a non-typeable strain
                                The isolation and purification of the high molecular weight pro-
enables the identification of the major protective epitopes of
protein by conventional epitope mapping. These epitopes can the
synthesised using standard techniques and incorporated into ful
                                                                                               Claim 5;
                                                                                                                      High molecular weight surface proteins - of non-typeable haemophilus which exhibit immunogenic properties
                                                                                                                                                                                                                                                                                                             30-SEP-1993
                                                                                                                                                                                                                                                                                                                                                            Haemophilus influenzae
                                                                                                                                                                                                                                                                                                                                                                                                                      High molecular weight protein 3
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26-APR-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAR41731
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                            N-PSDB;
                                                                                                                                                                                               Barenkamp
                                                                                                                                                                                                                                                           16-MAR-1992;
                                                                                                                                                                                                                                                                                    16-MAR-1993;
                                                                                                                                                                                                                                                                                                                                      WO9319090-A1
                                                                                                                                                                                                                                                                                                                                                                                    epitope;
                                                                                                                                                                                                                                                                                                                                                                                                HMW; high molecular weight
                       synthetic or recombinant
                                                                                                                                                                        WPI; 1993-320683/40.
                                                                                                                                                                                                                       (BARE/)
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                                                                                                                                                           AAQ49510
                                                                                                                                                                                                                       BARENKAMP S
INSERM INST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
             9
                                                                                             Figure 10; 100pp; English
                                                                                                                                                                                                                                                                                                                                                                                   immunity;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            standard; Protein; 1338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TINATTGNANITTKTGEINGEVKSASGNVNITASGNTLNNVSNITGQNVTVTANSGAITT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -----FTIDTKTGD-----DGNGKVSTT---
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                                                                                                                                                                                               ទីក
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1227 AA;
           25-MAR-2003 to correct PN field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                (updated)
(first entry)
                                                                                                                                                                                                                                                           92GB-0005704
                                                                                                                                                                                                                                                                                    93WO-US02166
                                                                                                                                                                                                                                                                                                                                                                                  r weight protein; virus;
haemophilus influenzae.
                                                                                                                                                                                                                        NAT
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                                                                                                                                                                                                                                                                                                                                                                                                                         (HMW3).
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                                                                                                                                                                                                                                                                                                                                                                                               vaccine;
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                                                can then be
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RESULT 12
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                                           Query Match
Best Local S
Matches 31
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Best Local Similarity
Matches 31; Conserv
                                                                                                        The isolation and purification of the high molecular weight protein enables the identification of the major protective epitopes of the protein by conventional epitope mapping. These epitopes can then be synthesised using standard techniques and incorporated into fully synthetic or recombinant vaccines.

(Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                                                                                            High molecular weight surface proteins - of non-typeable haemophilus which exhibit immunogenic properties
                                                                                         Sequence
                                                                                                                                                                                                                                                 N-PSDB; AAQ49511.
                                                                                                                                                                                          Claim 6; Figure 10;
                                                                                                                                                                                                                                                              WPI;
                                                                                                                                                                                                                                                                                                                                        16-MAR-1992;
                                                                                                                                                                                                                                                                                                                                                                                     30-SEP-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                Haemophilus influenzae
                                                                                                                                                                                                                                                                                                                                                                                                                                                    HMW; high molecular weight protein; virus; vaccine; influenza; epitope; immunity; haemophilus influenzae.
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26-APR-1994
                                                                                                                                                                                                                                                                                                       (BARE/) BARENKAMP S (INRM ) INSERM INST
                                                                                                                                                                                                                                                                                                                                                              16-MAR-1993;
                                                                                                                                                                                                                                                                                                                                                                                                          WO9319090-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    High molecular weight protein 4 (HMW4).
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                                                       Similarity
ATSGTVNISTKTGDIKGGIESTSGNVNITASGNTLKVSNITGQDVTVTADAGALTTTAGS
                       STAGTAEAKAIAGAIKGGKE-----
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATSGTVNISTKTGDIKGGIESTSGNVNITASGNTLKVSNITGQDVTVTADAGALTTTAGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STAGTAEAKAIAGAIKGGKE------GDTFDYKGVT-----
                                                                                         1529 AA;
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                                            Conservative
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(first entry)
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NAT SANTE & RECH MEDICALE.
                                         19.2%; Score (
25.4%; Pred. Misr
                                                                                                                                                                                        100pp;
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                                                                                                                                                                                        English.
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Pred. No. 5.2;
                                            Mismatches
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                                                      86.5;
No. 6.
                      GDTFDYKGVT
                                                                DB 14;
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                                          42;
                                                               Length 1529;
                                          Indels
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AAW30291
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     Query Match
Best Local S
Matches 31
                                                                                                                                                            This protein comprises the high molecular weight surface protein (HWM3 (125 kDa) of non-typeable Haemophilus influenzae strain 5 that the immunological ability to protect against disease caused by a non-typeable Haemophilus strain and is characterised by at least come surface-exposed B-cell epitope that is recognised by monoclonal antibody AD6. The HMW3 amino acid sequence was deduced from an isolated hmw3 gene (see AAT90992). HMW1 (see AAW30293), HMW2 (see Conjugate comprising HMW3 linked to an antigen, hapten acids corresponding to at least protective epitope of f-150 amino acids corresponding to at least protective epitope of HMW3 are also claimed. HMW9 proteins, conjugates and peptides can be used in vaccines, as immunogens for preparation of antibodies and as antigens for detection of these antibodies.
                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 1; Page 93-97; 183pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  High molecular weight proteins of non-typeable Haemophilus influenzae - useful for vaccine production
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 1997-503038/46.
N-PSDB; AAT90992.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-APR-1996;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Haemophilus influenzae strain 5.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (BARE/) BARENKAMP S J.
  Local Similarity 25.4
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                                                                                                                A.
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                          19.2%;
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  10;
  Score 86.5; D
Pred. No. 6.4;
0; Mismatches
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RESULT 14
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  Matches
              Query Match
Best Local
                                                                                            This protein comprises the high molecular weight surface protein HRW4 (123 kDa) of non-typeable Haemophilus influenzae strain 5 that has the immunological ability to protect against disease caused by a non-typeable Haemophilus strain and is characterized by at least one surface-exposed B-cell epitope that is recognised by monoclonal antibody AD6. The HMW4 amino acid sequence was deduced from an isolated hmw4 gene (see AAT9093). HMW1 (see AAW30293), HMW2 (see AAW30294) and HMW3 (see AAW30291) have also been identified. A conjugate comprising HMW4 linked to an antigen, hapten or polysaccharide, and a synthetic peptide of 6-150 amino acids corresponding to at least protective epitope of HMW4 are also claimed. HMW proteins, conjugates and peptides can be used in vaccines, as immunogens for preparation of antibodies and as antigen, and as immunogens for preparation of antibodies and as
                                                                                                                                                                                                                                                                                                                          High molecular weight proteins of non-typeable Haemophilus influenzae - useful for vaccine production
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Non-typeable Haemophilus; HMW4; immunogen; vaccine;
                                                        Sequence
                                                                                                                                                                                                                                                                                                Claim 1; Page 97-102; 183pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                Barenkamp SJ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              09-OCT-1997.
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DB; AAT90993.
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  31;
                Similarity
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                                                                                   for detection of these antibodies
                                                        1601
 19.2%; ilarity 25.4%; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Haemophilus high mol.wt. surface
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ----FTIDTKTGDDGNGKVSTTINGEKVTLTVADIATGATDVNAATLQSSKNVYTS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers 372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note=
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "encoded by AAT"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  high molecular weight surface protein; otitis media.
  10;
Score 86.5; DB
Pred. No. 6.5;
10; Mismatches
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                            DВ
                            18;
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  Indels
                          Length 1601;
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 Gaps
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                                                                                         Query Match
                                                                                       Matchés
                                                                                                                                                                Haemophilus adhesion protein HA2 (AAR99393) is associated with the formation of surface fibrils involved in adhesion to various host cells; it is also referred to hsf (Haemophilus surface fibrils). Its amino acid sequence was deduced from a genomic DNA clone (AAT41476) derived from Haemophilus influenzae type b strain C65. Large quantities of recombinant HA2 can be produced in transformed prokaryotic or eukaryotic host cells, for use in vaccines against
                                                                                                                                  Sequence
                                                                                                                                                         prokaryotic or eukaryoti
H. influenzae infection.
                                                                                                                                                                                                                                                          Claim 5; Page 66-73; 120pp; English.
                                                                                                                                                                                                                                                                                Recombinant Haemophilus adhesion proteins HAI vaccines against H. influenzae infection.
                                                                                                                                                                                                                                                                                                                             WPI; 1996-455364/45.
                                                                                                                                                                                                                                                                                                                                                   Barenkamp SJ,
                                                                                                                                                                                                                                                                                                                                                                          (UNIW)
                                                                                                                                                                                                                                                                                                                                                                                                           24-MAR-1995;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                      03-OCT-1996.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             W09630519-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Haemophilus influenzae type b strain C54
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAR99393;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAR99393 standard; Protein; 2353 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1199
                                          1436 SATVSDKLSLGT-NGNKVNITSDTKGLNFAKDSKTGDDAN----IHLNGIASTLTDTLLN
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1491 SGAT 1494
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                                                                 ω
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                     TGAT
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                                                               AGTAEAKAIAGAIKGGKEGDTFDYKGVTFTIDTKTGDDGNGKVSTTINGEKVTLTVADIA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ----FTIDTKTGDDGNGKVSTTINGEKVTLTVADIATGATDVNAATLQSSKNVYTS
                                                                                                                                  2353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        adhesion protein; HA2; hsf protein; vaccine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             adhesion protein HA2
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                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                          ST LOUIS. WASHINGTON.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
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                                                                                                 19.0%;
39.1%;
                                                                                                 Score 85.5;
Pred. No. 13;
                                                                                      Mismatches
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                                                                                                            B
                                                                                                            17;
                                                                                      28;
                                                                                                                                                                                                                                                                                            and HA2
                                                                                                          Length
                                                                                      Indels
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                                                                                                            2353;
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